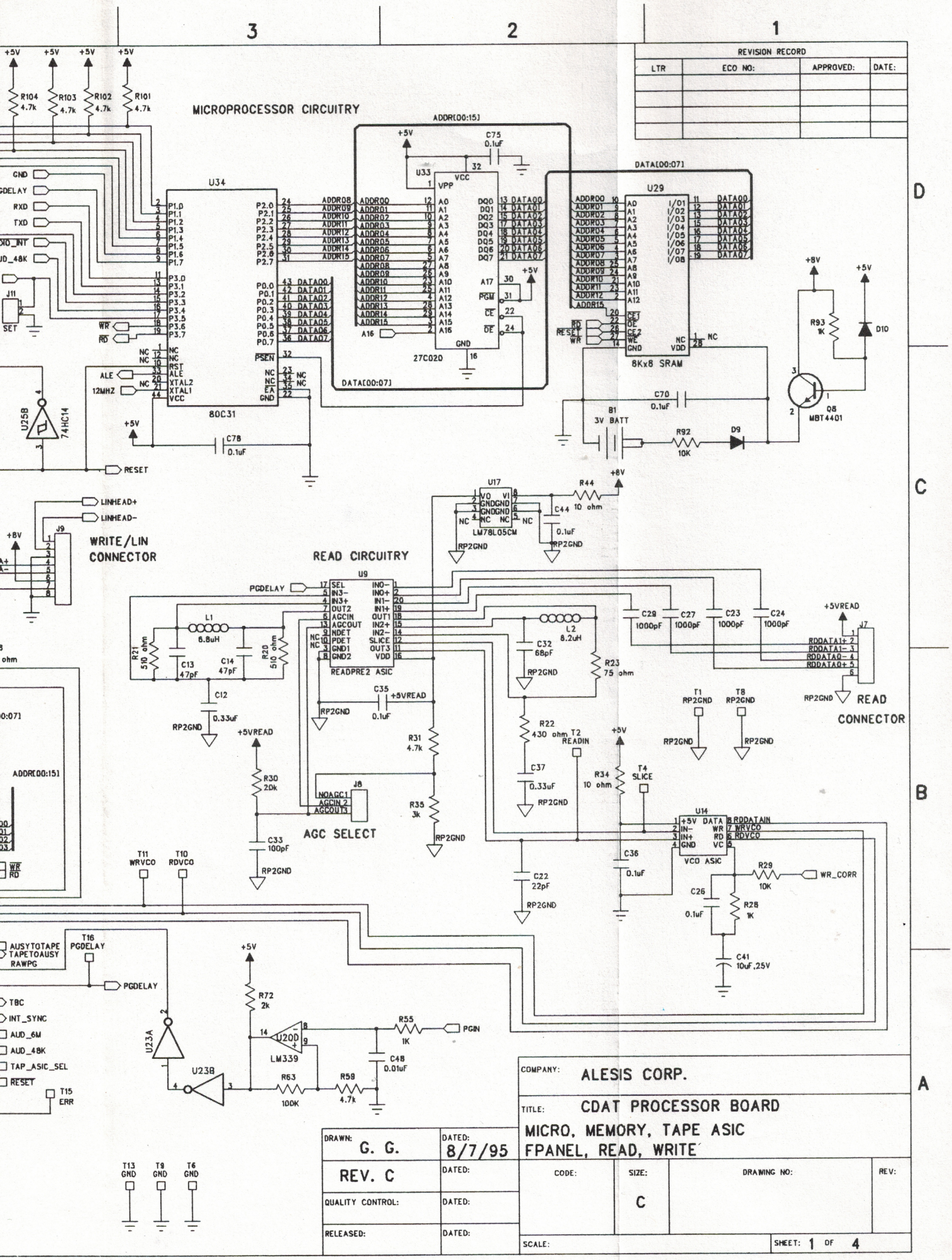
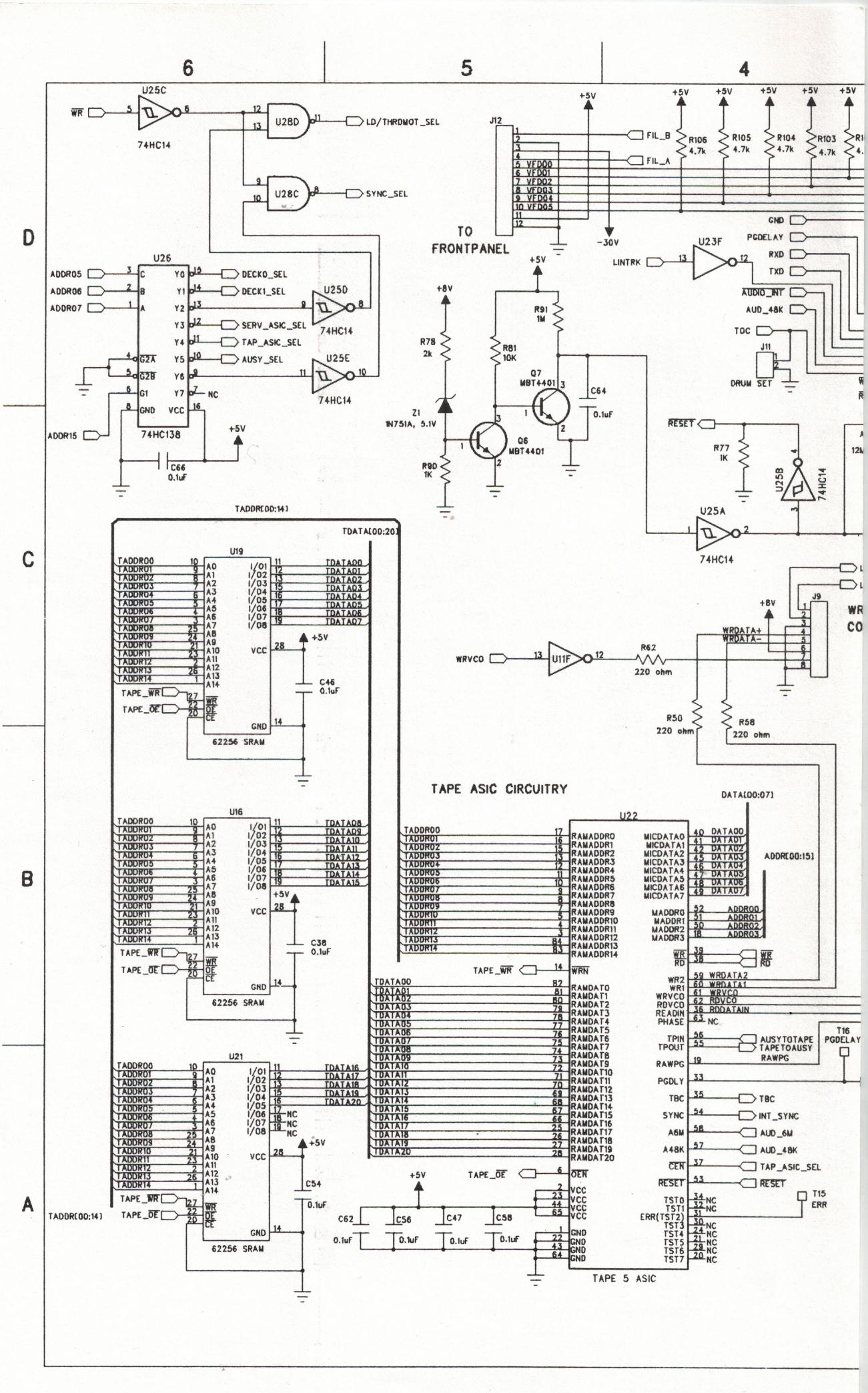
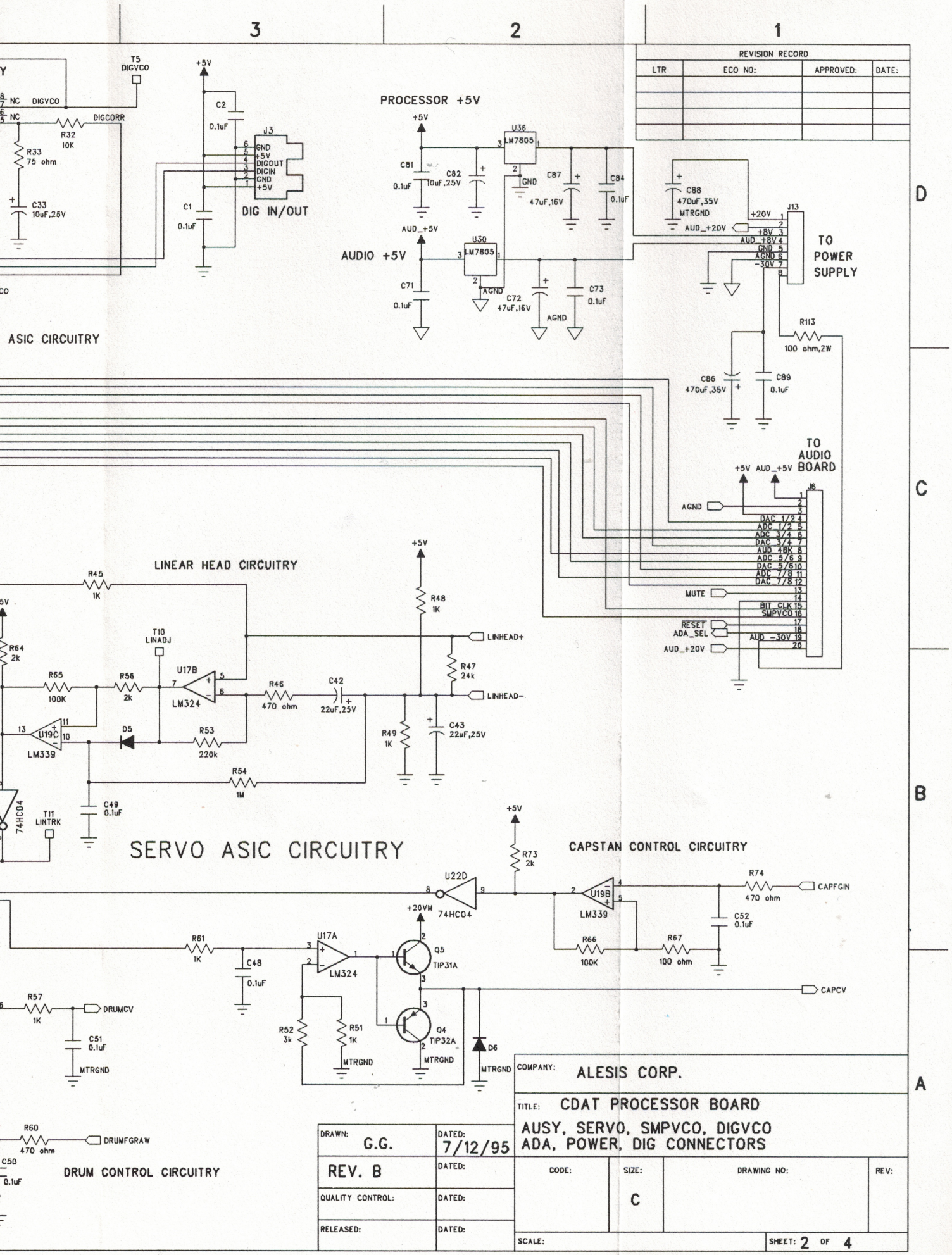
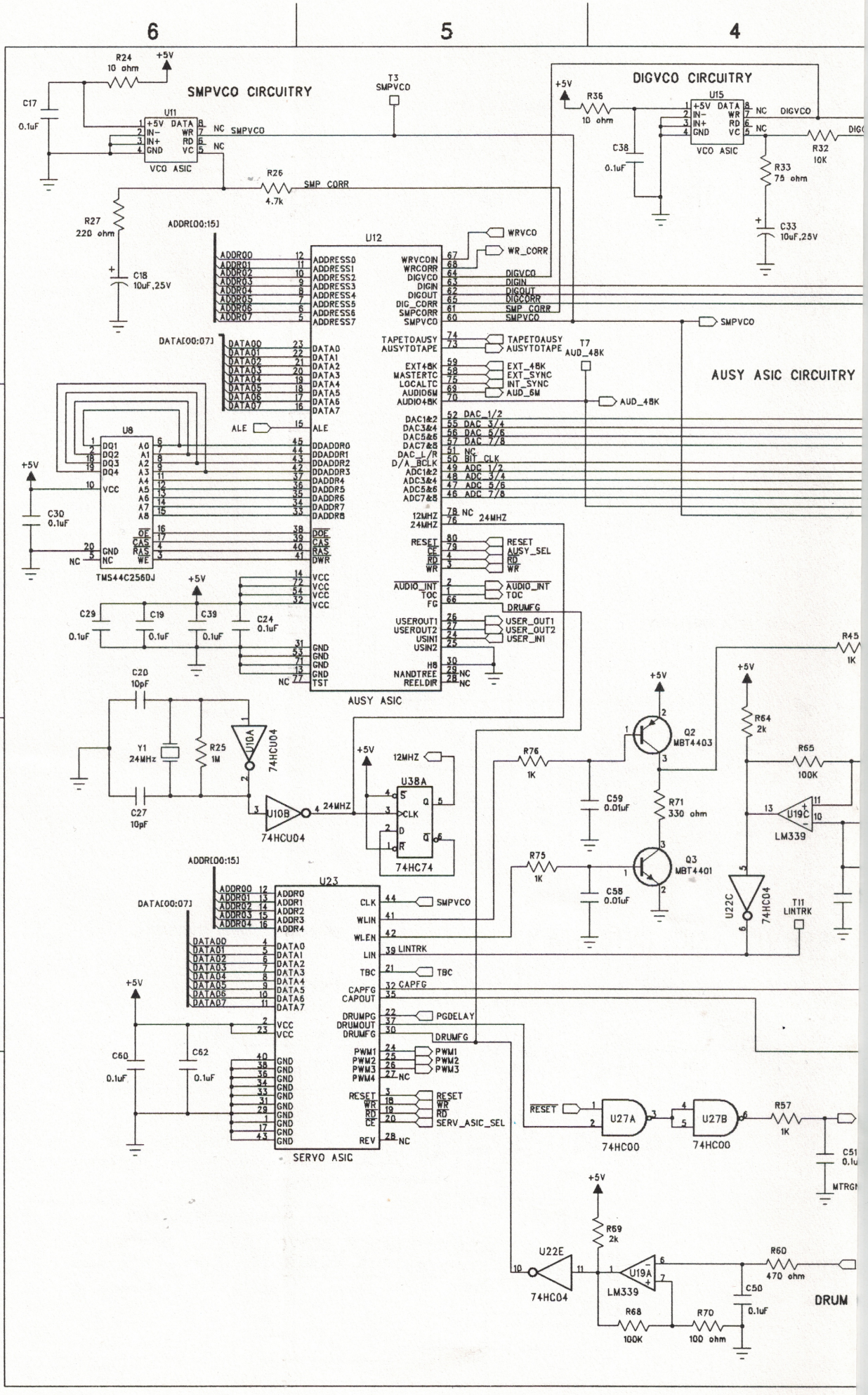
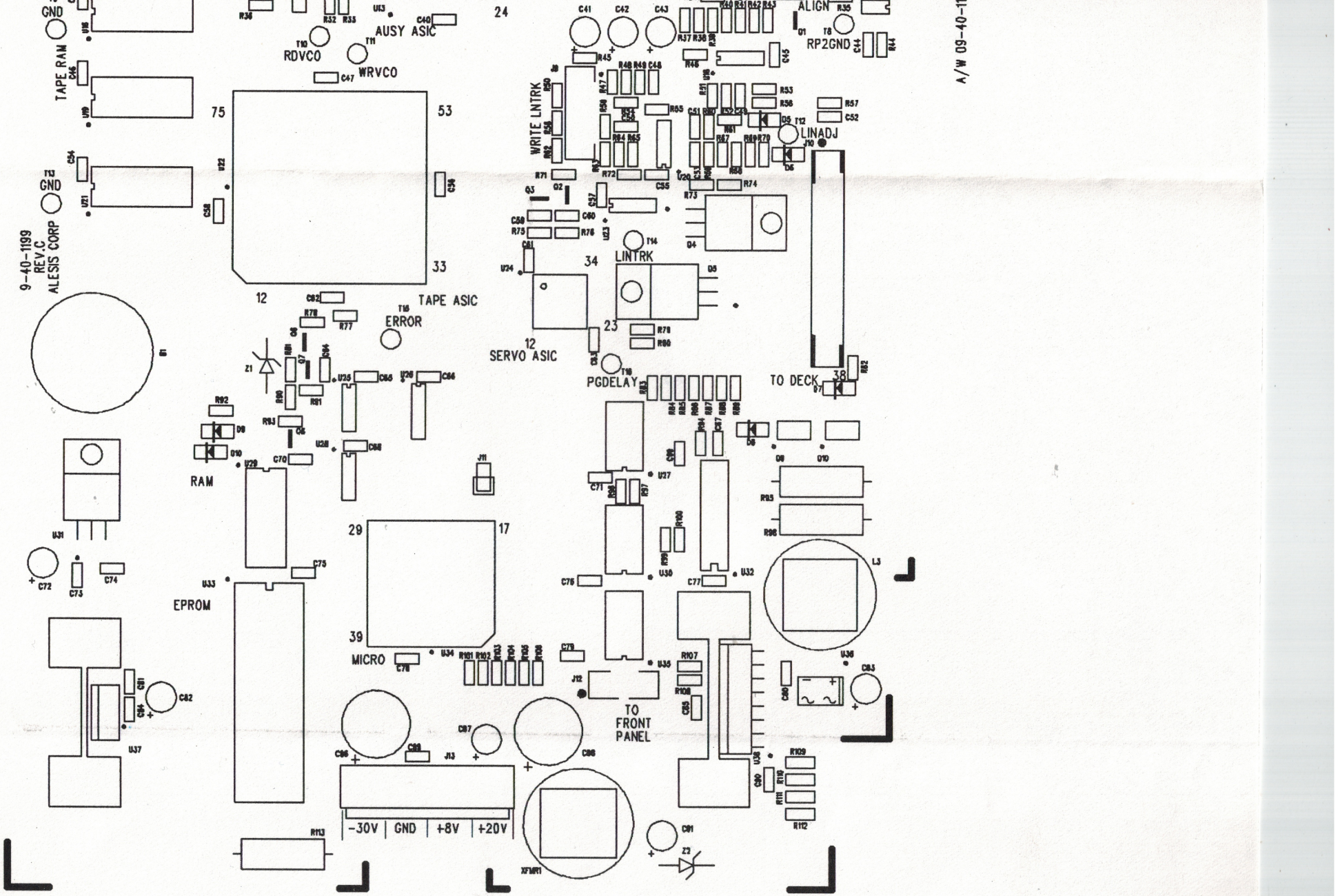
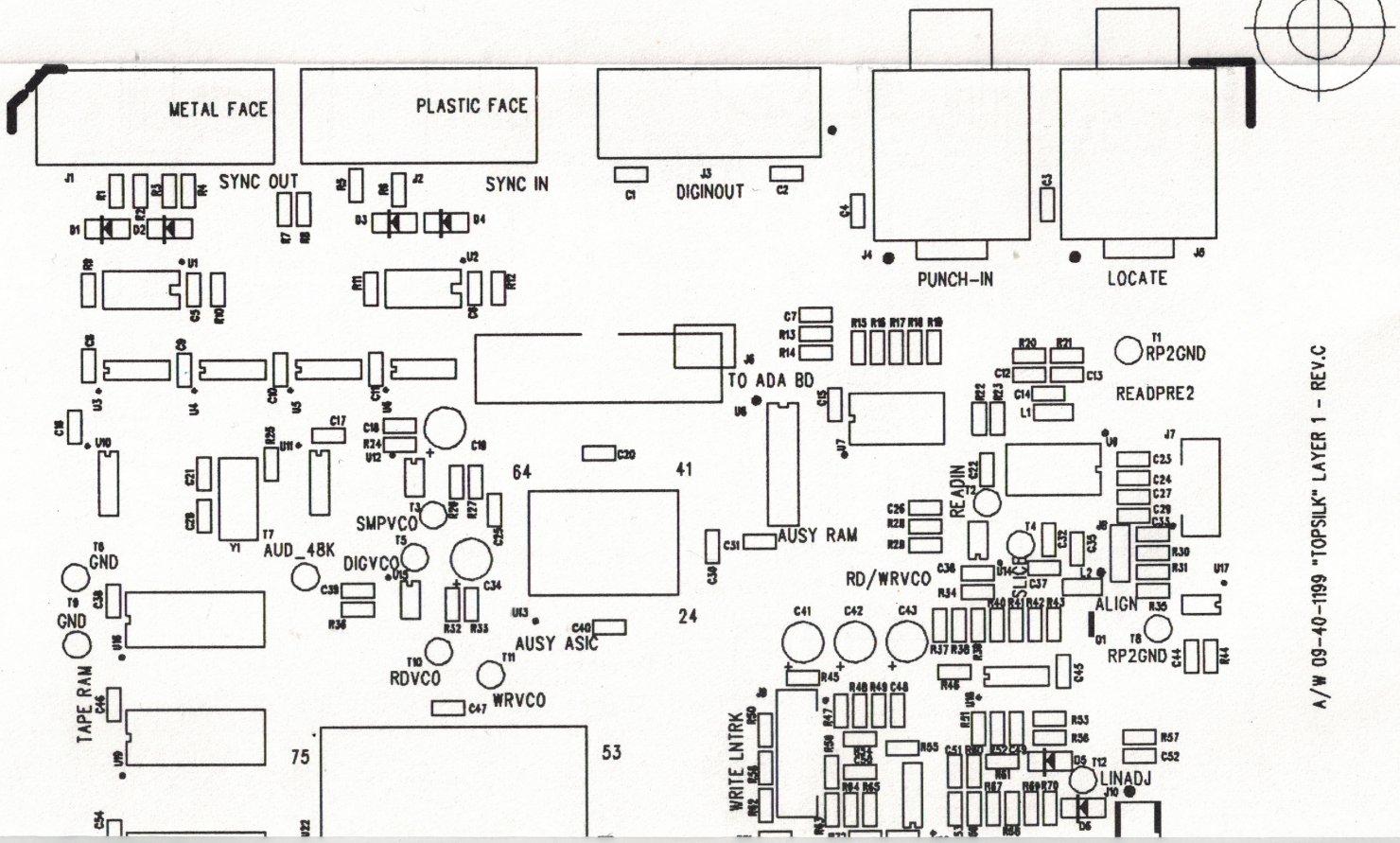

3
2
1
D
C
B
A
REVISION RECORD
LTR
ECO NO:
APPROVED:
DATE:
MICROPROCESSOR CIRCUITRY
U34
80C31
U33
27C020
U29
8Kx8 SRAM
ADDR[00:15]
DATA[00:07]
WRITE/LIN CONNECTOR
READ CIRCUITRY
READPRE2 ASIC
AGC SELECT
VCO ASIC
READ CONNECTOR
LM78L05CM
LM339
Q8 MBT4401
COMPANY: ALESIS CORP.
TITLE: CDAT PROCESSOR BOARD
MICRO, MEMORY, TAPE ASIC
FPANEL, READ, WRITE
DRAWN: G. G.
DATED: 8/7/95
REV. C
QUALITY CONTROL:
RELEASED:
CODE:
SIZE: C
DRAWING NO:
REV:
SCALE:
SHEET: 1 OF 4


6
5
4
D
C
B
A
U25C
74HC14
U28D
U28C
LD/THRDMOT_SEL
SYNC_SEL
U26
74HC138
DECK0_SEL
DECK1_SEL
SERV_ASIC_SEL
TAP_ASIC_SEL
AUSY_SEL
U25D
U25E
74HC14
ADDR15
C66
0.1uF
TO
FRONTPANEL
J12
FIL_B
FIL_A
VFD00
VFD01
VFD02
VFD03
VFD04
VFD05
R106
R105
R104
R103
4.7k
-30V
U23F
LINTRK
GND
PGDELAY
RXD
TXD
AUDIO_INT
AUD_48K
TOC
J11
DRUM SET
R91
1M
R81
10K
R78
2k
Z1
1N751A, 5.1V
Q7
MBT4401
Q6
MBT4401
C64
0.1uF
R90
1K
RESET
R77
1K
U25B
U25A
74HC14
TADDR[00:14]
TDATA[00:20]
U19
U16
U21
62256 SRAM
TAPE_WR
TAPE_OE
C46
C38
C54
0.1uF
WRVCO
U11F
R62
220 ohm
R50
R58
WRDATA+
WRDATA-
J9
TAPE ASIC CIRCUITRY
U22
DATA[00:07]
ADDR[00:15]
TAPE_WR
TAPE_OE
AUSYTOTAPE
TAPETOAUSY
RAWPG
PGDLY
TBC
INT_SYNC
AUD_6M
AUD_48K
TAP_ASIC_SEL
RESET
T16
PGDELAY
T15
ERR
C62
C56
C47
C58
0.1uF
TAPE 5 ASIC

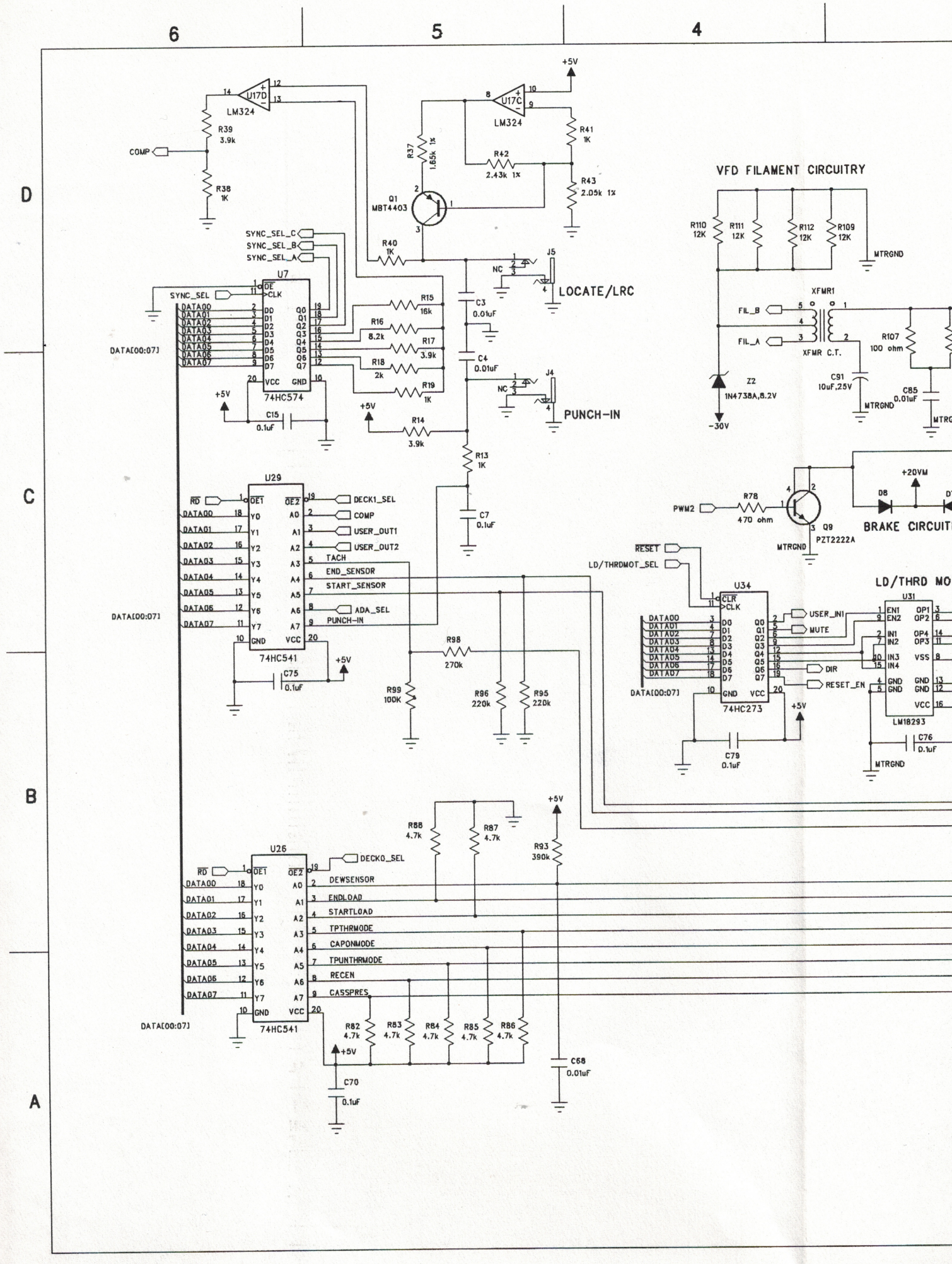

3
2
1
REVISION RECORD
LTR
ECO NO:
APPROVED:
DATE:
T5
DIGVCO
NC
DIGVCO
DIGCORR
R32
10K
R33
75 ohm
C33
10uF,25V
+5V
C2
0.1uF
C1
0.1uF
J3
GND
+5V
DIGOUT
DIGIN
GND
+5V
DIG IN/OUT
ASIC CIRCUITRY
PROCESSOR +5V
U36
LM7805
C81
0.1uF
C82
10uF,25V
C87
47uF,16V
C84
0.1uF
GND
AUDIO +5V
AUD_+5V
U30
LM7805
C71
0.1uF
C72
47uF,16V
C73
0.1uF
AGND
C88
470uF,35V
MTRGND
AUD_+20V
+20V
+8V
AUD +8V
GND
AGND
-30V
J13
TO
POWER
SUPPLY
R113
100 ohm,2W
C86
470uF,35V
C89
0.1uF
TO
AUDIO
BOARD
+5V
AUD_+5V
J6
AGND
DAC 1/2
ADC 1/2
ADC 3/4
DAC 3/4
AUD 48K
ADC 5/6
DAC 5/6
ADC 7/8
DAC 7/8
MUTE
BIT CLK
SMPVCO
RESET
ADA_SEL
AUD -30V
AUD_+20V
LINEAR HEAD CIRCUITRY
R45
1K
R64
2k
R65
100K
R56
2k
T10
LINADJ
U17B
LM324
R46
470 ohm
C42
22uF,25V
R48
1K
LINHEAD+
R47
24k
LINHEAD-
U19C
LM339
D5
R53
220k
R49
1K
C43
22uF,25V
R54
1M
C49
0.1uF
74HC04
T11
LINTRK
SERVO ASIC CIRCUITRY
CAPSTAN CONTROL CIRCUITRY
+5V
R73
2k
U22D
74HC04
+20VM
U19B
LM339
R74
470 ohm
CAPFGIN
C52
0.1uF
R66
100K
R67
100 ohm
R61
1K
C48
0.1uF
U17A
LM324
Q5
TIP31A
CAPCV
R57
1K
DRUMCV
C51
0.1uF
MTRGND
R52
3k
R51
1K
Q4
TIP32A
D6
R60
470 ohm
DRUMFGRAW
C50
0.1uF
DRUM CONTROL CIRCUITRY
COMPANY: ALESIS CORP.
TITLE: CDAT PROCESSOR BOARD
AUSY, SERVO, SMPVCO, DIGVCO
ADA, POWER, DIG CONNECTORS
DRAWN: G.G.
DATED: 7/12/95
REV. B
DATED:
QUALITY CONTROL:
DATED:
RELEASED:
DATED:
CODE:
SIZE: C
DRAWING NO:
REV:
SCALE:
SHEET: 2 OF 4
D
C
B
A


6
5
4
D
C
B
A
SMPVCO CIRCUITRY
DIGVCO CIRCUITRY
AUSY ASIC CIRCUITRY
VCO ASIC
TMS44C256DJ
AUSY ASIC
SERVO ASIC
74HC74
74HC00
74HC04
LM339
R24 10 ohm
C17 0.1uF
U11
R26 4.7k
SMP CORR
R27 220 ohm
C18 10uF,25V
T3 SMPVCO
SMPVCO
R36 10 ohm
U15
C38 0.1uF
R33 75 ohm
R32 10K
C33 10uF,25V
DIGVCO
ADDR[00:15]
DATA[00:07]
U12
WRVCO
WR_CORR
DIGVCO
DIGIN
DIGOUT
DIGCORR
SMP_CORR
SMPVCO
TAPETOAUSY
AUSYTOTAPE
T7 AUD_48K
EXT_48K
EXT_SYNC
INT_SYNC
AUD_6M
AUD_48K
DAC_1/2
DAC_3/4
DAC_5/6
DAC_7/8
BIT_CLK
ADC_1/2
ADC_3/4
ADC_5/6
ADC_7/8
24MHZ
RESET
AUSY_SEL
RD
WR
AUDIO_INT
TOC
DRUMFG
USER_OUT1
USER_OUT2
USER_IN1
U8
C30 0.1uF
C29 0.1uF
C19 0.1uF
C39 0.1uF
C24 0.1uF
C20 10pF
Y1 24MHz
R25 1M
C27 10pF
U10A
U10B
74HCU04
U38A
12MHZ
R45 1K
R64 2k
R65 100K
R76 1K
R71 330 ohm
R75 1K
C59 0.01uF
C58 0.01uF
Q2 MBT4403
Q3 MBT4401
U19C
U22C
T11 LINTRK
LINTRK
U23
CLK
WLIN
WLEN
LIN
TBC
CAPFG
CAPOUT
DRUMPG
DRUMOUT
PGDELAY
PWM1
PWM2
PWM3
SERV_ASIC_SEL
REV
C60 0.1uF
C62 0.1uF
U27A
U27B
R57 1K
C51 0.1u
MTRGN
U22E
R69 2k
U19A
R60 470 ohm
C50 0.1uF
R68 100K
R70 100 ohm
DRUM

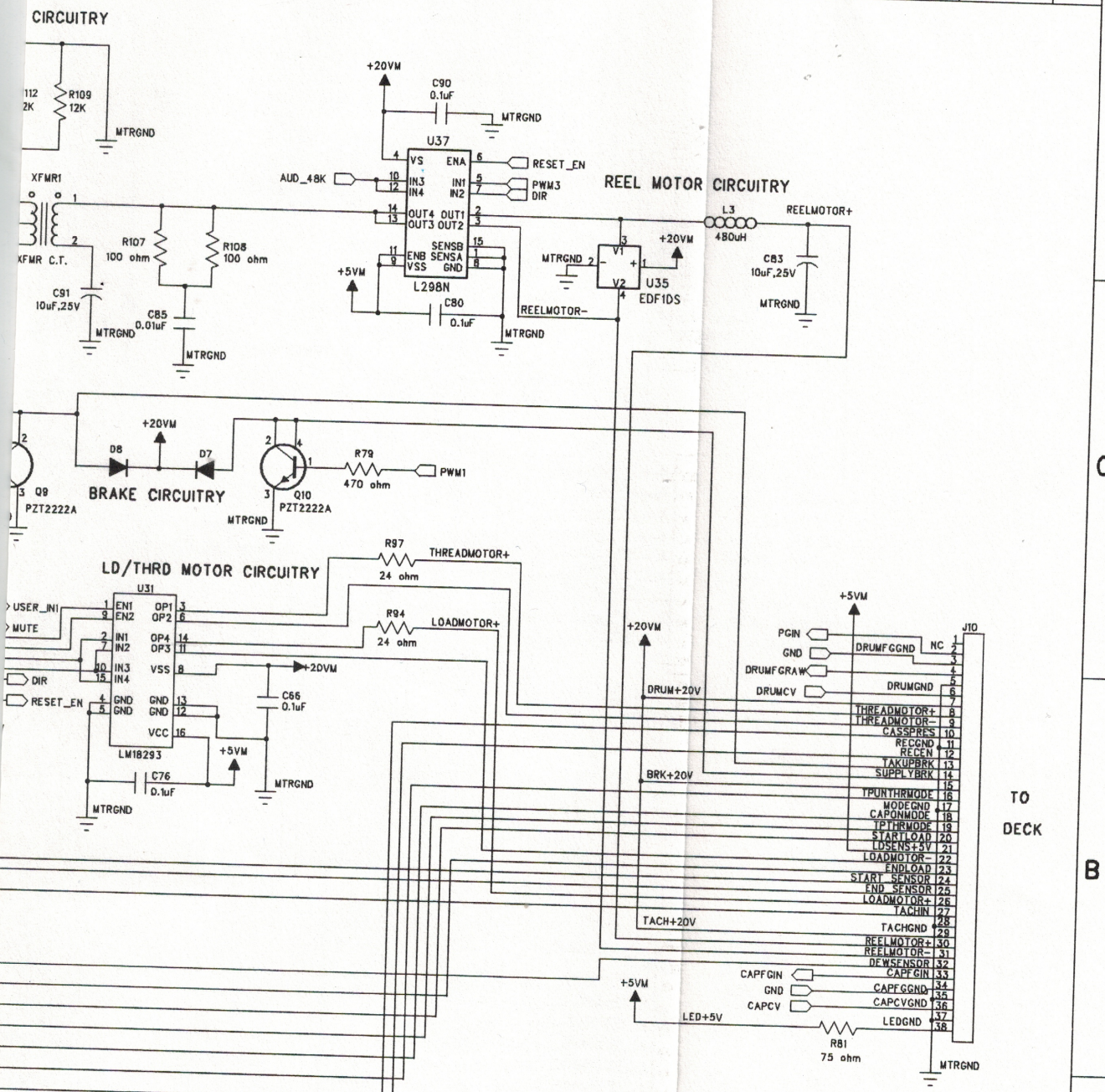

9-40-1199
REV.C
ALESIS CORP
A/W 09-40-11
GND
TAPE RAM
GND
RDVCO
WRVCO
AUSY ASIC
ALIGN
RP2GND
WRITE LNTRK
LINADJ
LINTRK
TAPE ASIC
ERROR
SERVO ASIC
PGDELAY
TO DECK
RAM
EPROM
MICRO
TO
FRONT
PANEL
-30V
GND
+8V
+20V
XFMR1
75
53
33
12
34
23
29
17
39
38
24



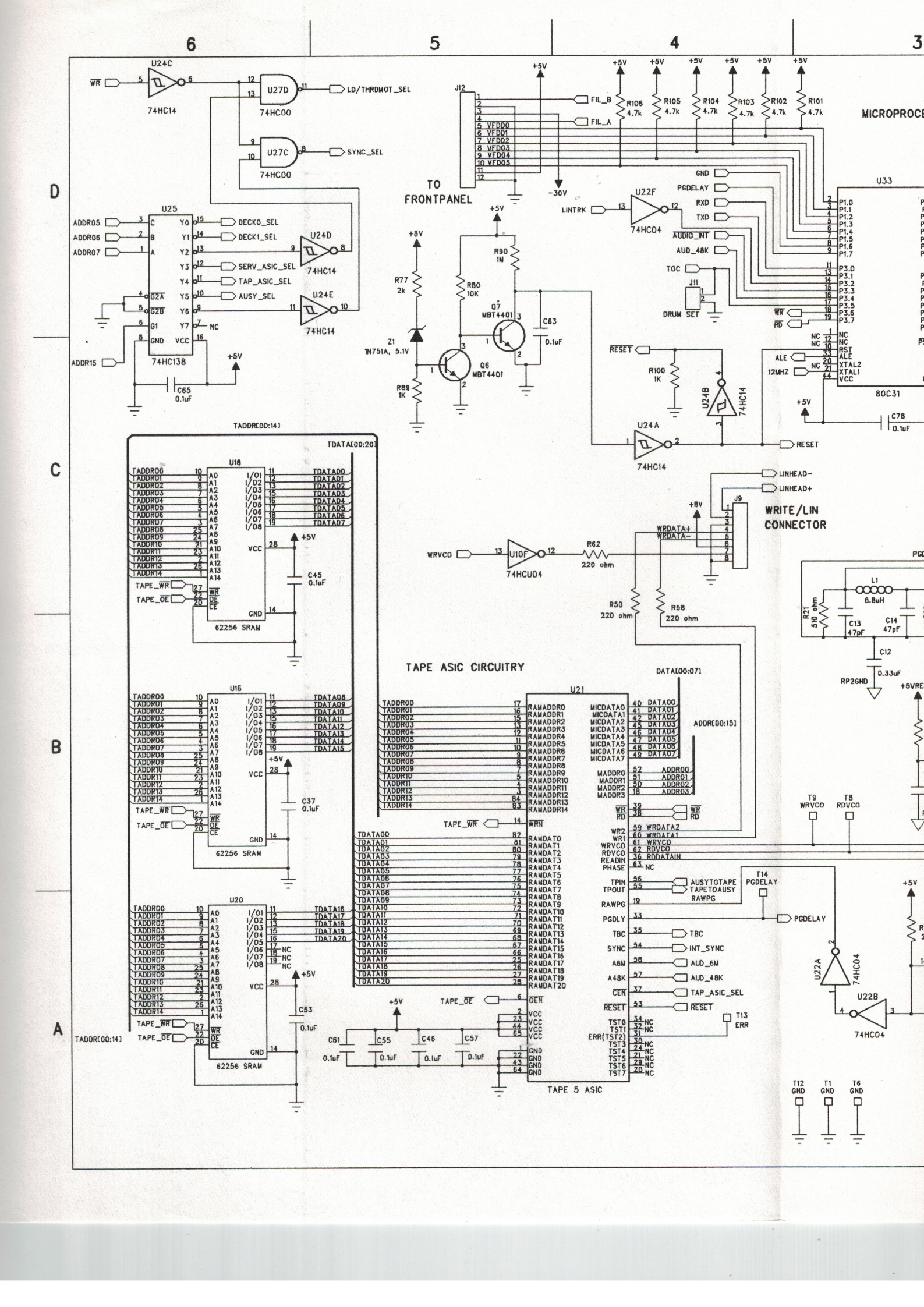
A/W 09-40-1199 "TOPSILK" LAYER 1 - REV.C

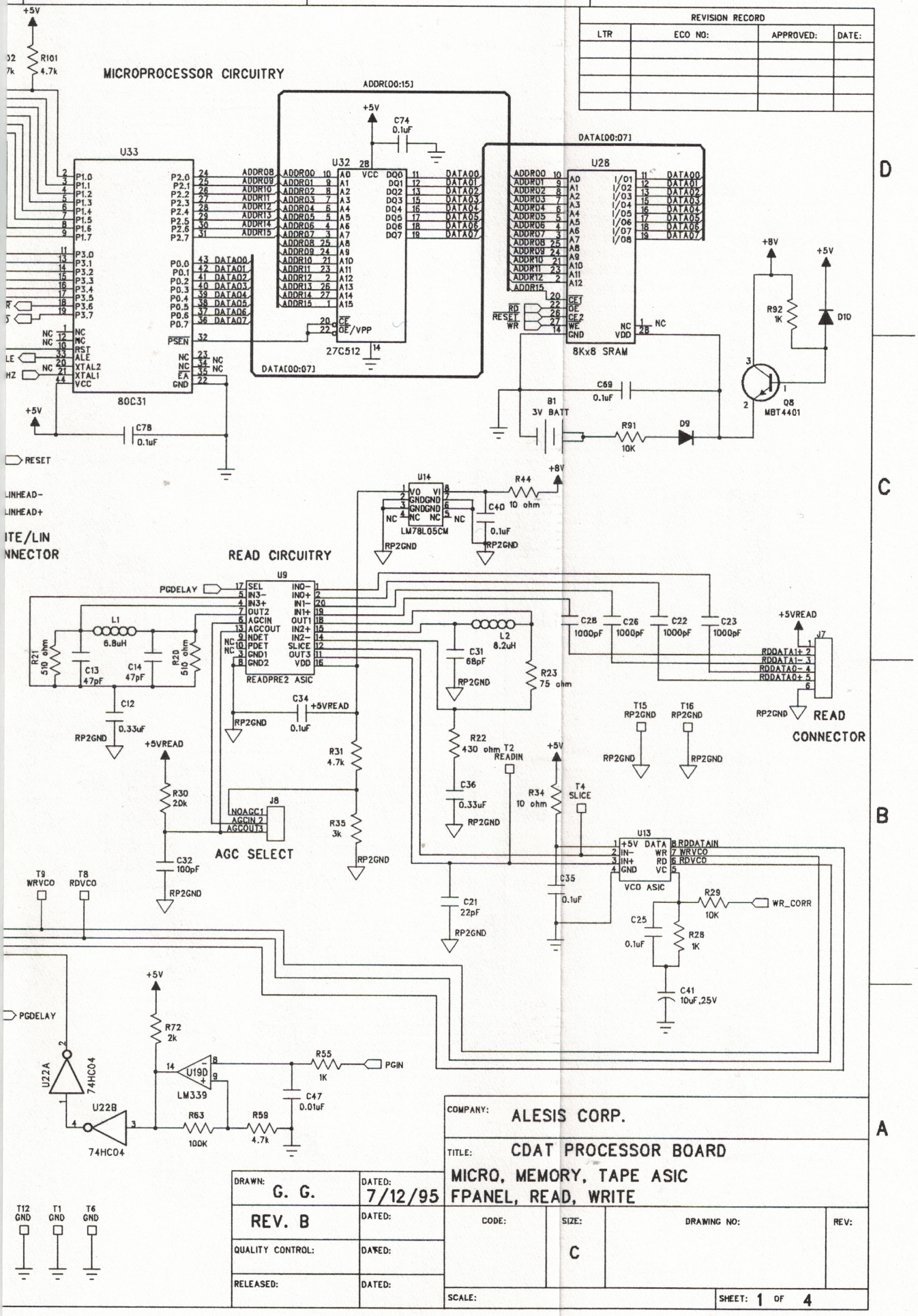

6
5
4
D
C
B
A
VFD FILAMENT CIRCUITRY
LOCATE/LRC
PUNCH-IN
BRAKE CIRCUIT
LD/THRD MO
LM324
74HC574
74HC541
74HC273
LM18293
PZT2222A
1N4738A,8.2V
XFMR C.T.
MTRGND
-30V
+5V
+20VM
COMP
SYNC_SEL
SYNC_SEL_C
SYNC_SEL_B
SYNC_SEL_A
DATA[00:07]
RESET
LD/THRDMOT_SEL
DECK1_SEL
DECK0_SEL
USER_OUT1
USER_OUT2
TACH
END_SENSOR
START_SENSOR
ADA_SEL
PUNCH-IN
USER_IN1
MUTE
DIR
RESET_EN
DEWSENSOR
ENDLOAD
STARTLOAD
TPTHRMODE
CAPONMODE
TPUNTHRMODE
RECEN
CASSPRES
PWM2
U7
U17D
U17C
U29
U26
U34
U31
Q1 MBT4403
Q9
J4
J5
XFMR1
Z2
R37 1.65k 1%
R39 3.9k
R38 1K
R40 1K
R41 1K
R42 2.43k 1%
R43 2.05k 1%
R15 16k
R16 8.2k
R17 3.9k
R18 2k
R19 1K
R14 3.9k
R13 1K
R110 12K
R111 12K
R112 12K
R109 12K
R107 100 ohm
R78 470 ohm
R98 270k
R99 100K
R96 220k
R95 220k
R88 4.7k
R87 4.7k
R93 390k
R82 4.7k
R83 4.7k
R84 4.7k
R85 4.7k
R86 4.7k
C3 0.01uF
C4 0.01uF
C7 0.1uF
C15 0.1uF
C75 0.1uF
C79 0.1uF
C76 0.1uF
C68 0.01uF
C70 0.1uF
C91 10uF,25V
C85 0.01uF

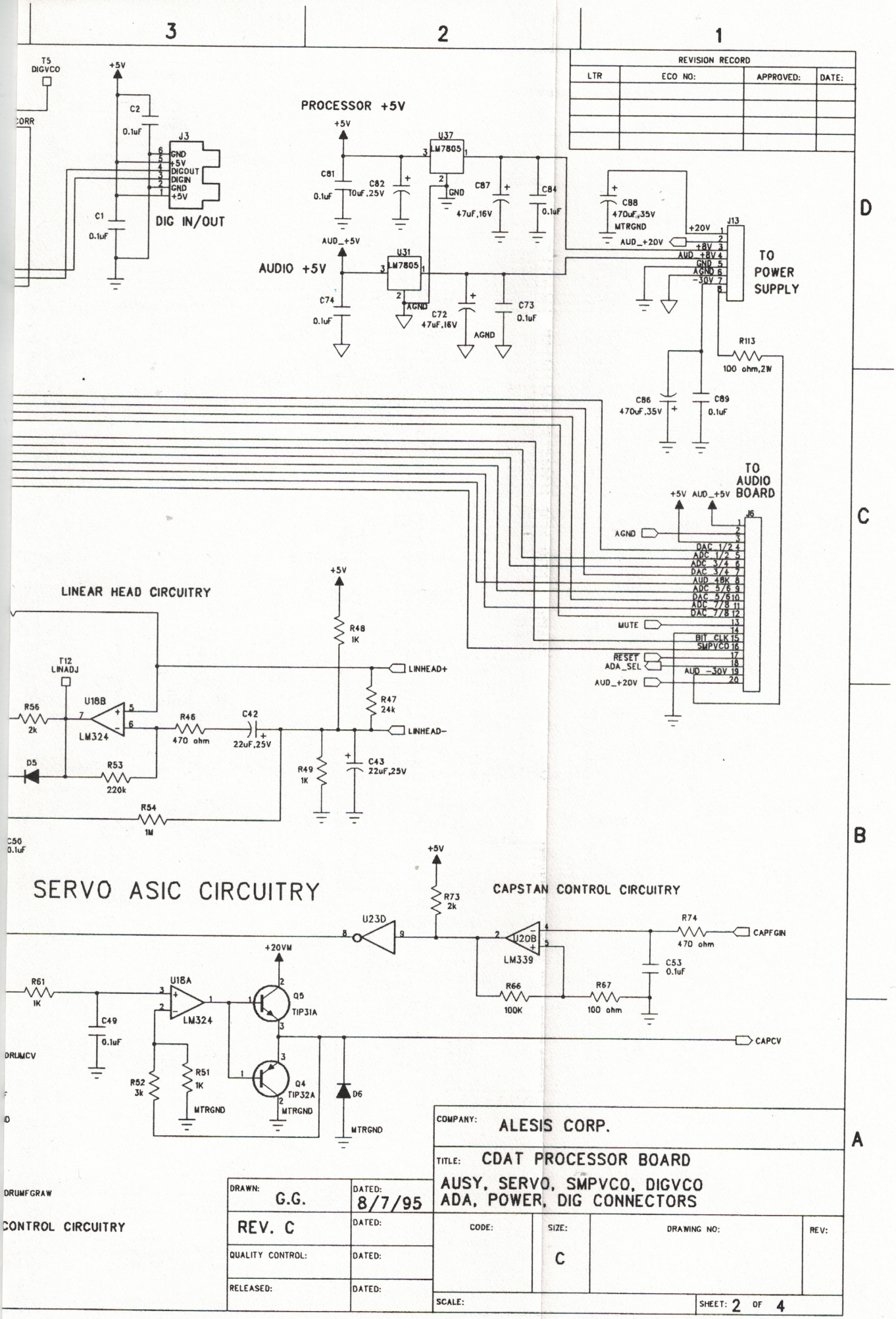
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

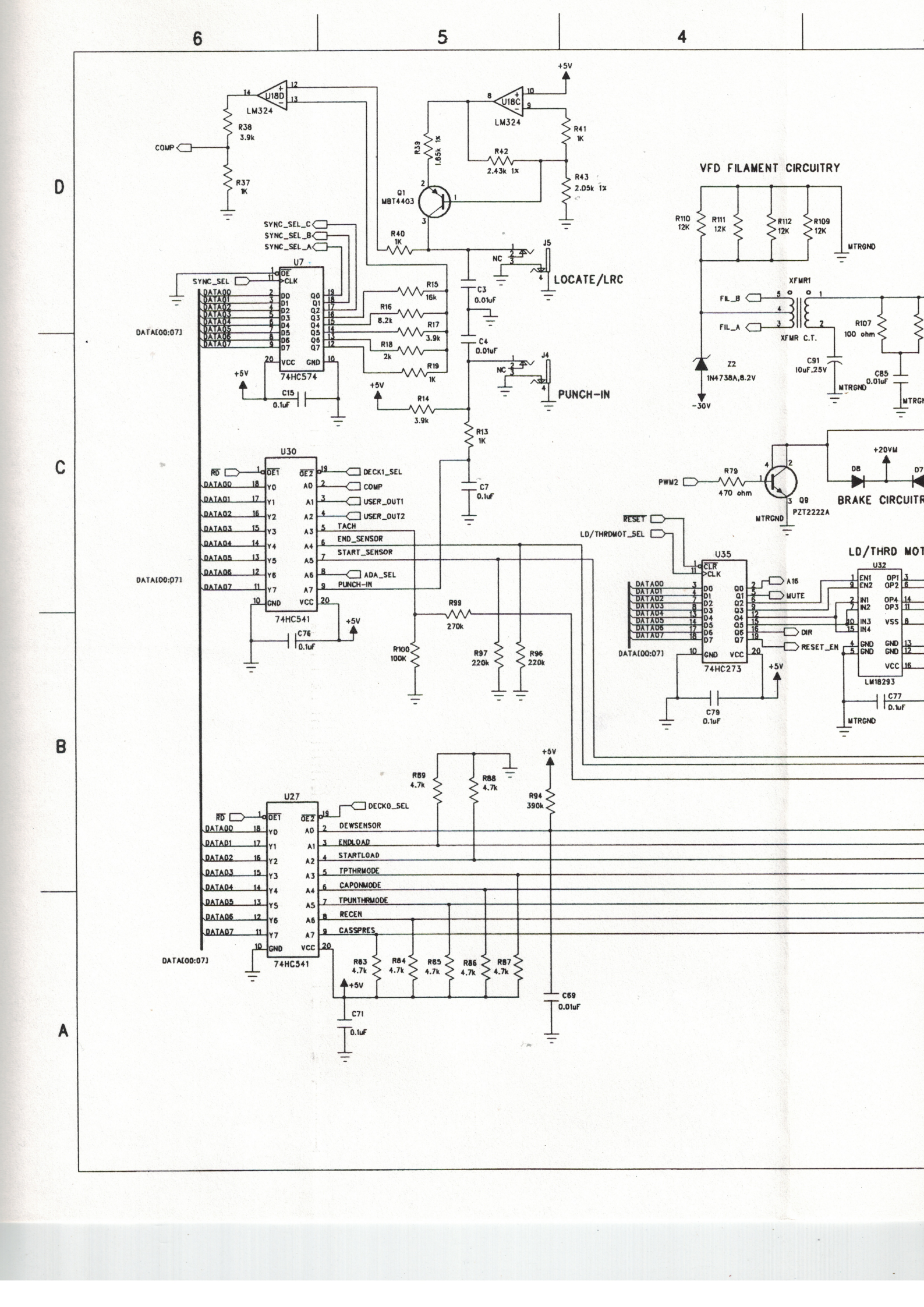


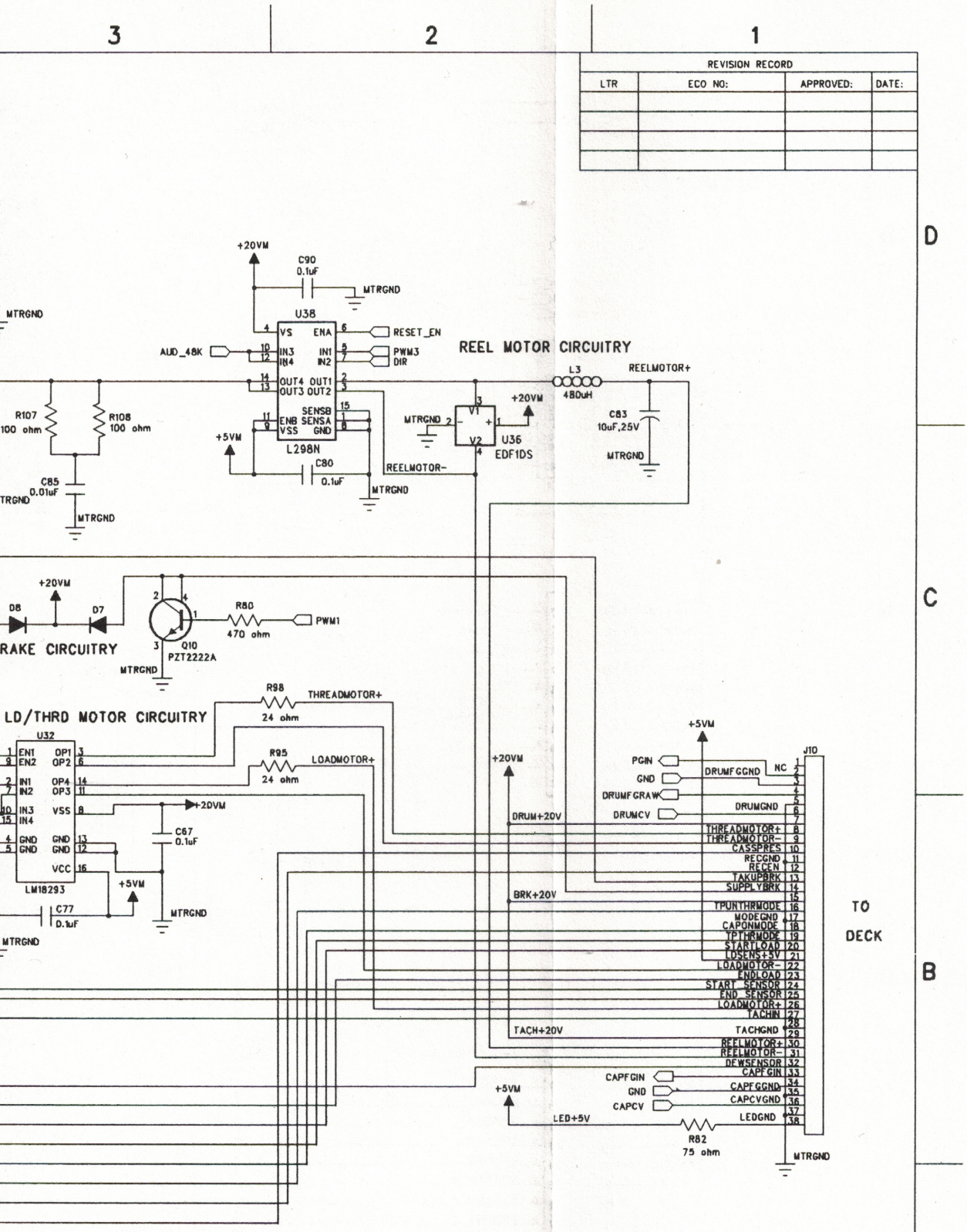
DRAWN: G. G.	DATED: 7/12/95	COMPANY: ALESIS CORP.	
REV. B	DATED:	TITLE: CDAT PROCESSOR BOARD DECK CONNECTIONS, FOOTSWITCH, LRC VFD FRONT PANEL FILAMENT	
QUALITY CONTROL:	DATED:	CODE:	SIZE: C
RELEASED:	DATED:	DRAWING NO:	REV:
		SCALE:	SHEET: 3 OF 4

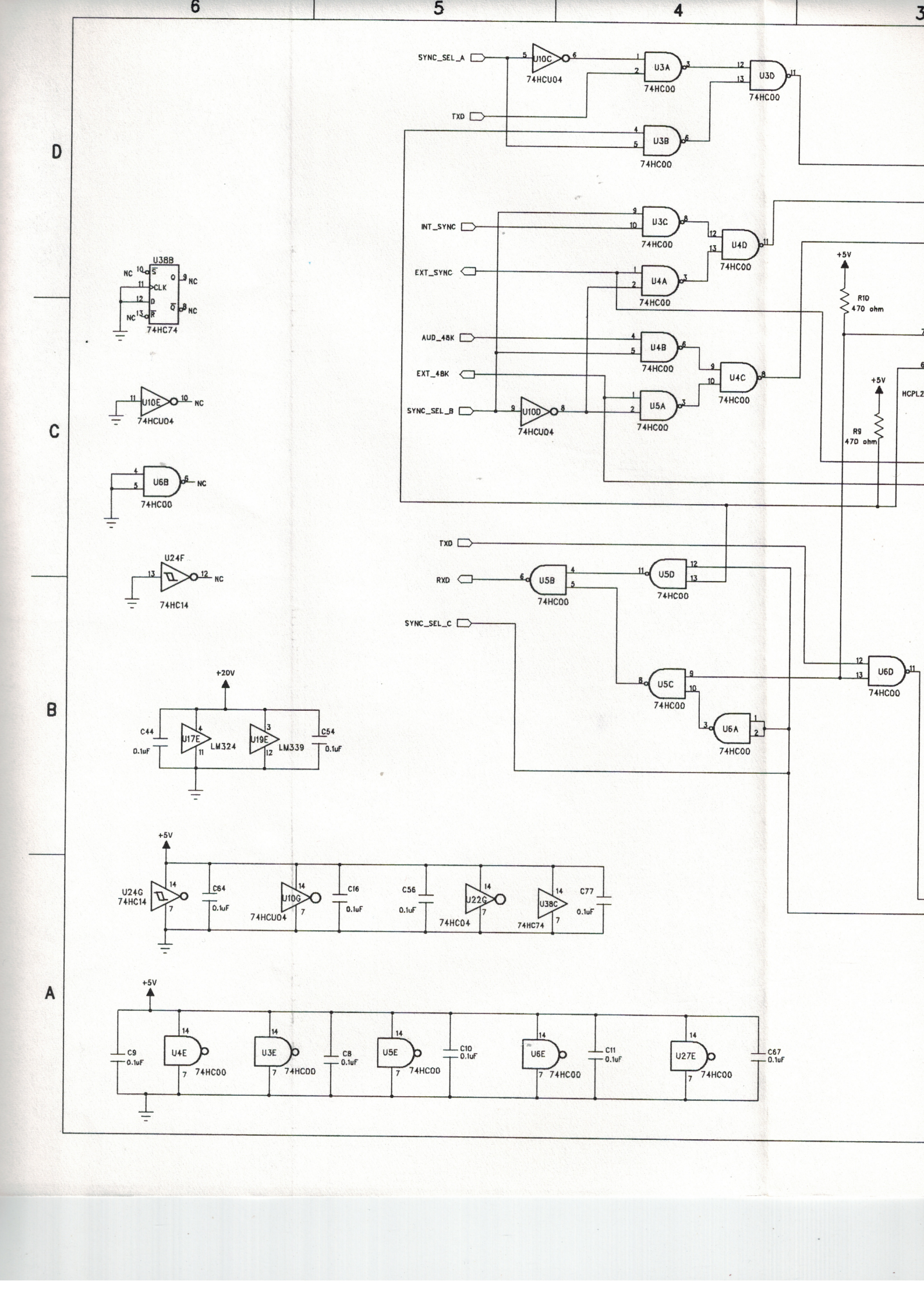

6
5
4
3
D
C
B
A
U24C
74HC14
U27D
74HC00
LD/THRDMOT_SEL
U27C
SYNC_SEL
TO FRONTPANEL
J12
FIL_B
FIL_A
VFD00
VFD01
VFD02
VFD03
VFD04
VFD05
R106 4.7k
R105 4.7k
R104 4.7k
R103 4.7k
R102 4.7k
R101 4.7k
-30V
MICROPROCE
U33
U22F
74HC04
LINTRK
PGDELAY
RXD
TXD
AUDIO_INT
AUD_48K
TOC
DRUM SET
J11
WR
RD
U25
74HC138
ADDR05
ADDR06
ADDR07
ADDR15
DECK0_SEL
DECK1_SEL
SERV_ASIC_SEL
TAP_ASIC_SEL
AUSY_SEL
NC
U24D
U24E
C65 0.1uF
+8V
R77 2k
R90 1M
R80 10K
Q7 MBT4401
C63 0.1uF
Z1 1N751A, 5.1V
Q6 MBT4401
R89 1K
RESET
R100 1K
U24B
U24A
ALE
12MHZ
XTAL2
XTAL1
80C31
C78 0.1uF
TADDR[00:14]
TDATA[00:20]
U18
U16
U20
62256 SRAM
C45 0.1uF
C37 0.1uF
C53 0.1uF
TAPE_WR
TAPE_OE
LINHEAD-
LINHEAD+
J9
WRITE/LIN CONNECTOR
WRVCO
U10F
74HCU04
R62 220 ohm
WRDATA+
WRDATA-
R50 220 ohm
R58 220 ohm
L1 6.8uH
R21 510 ohm
C13 47pF
C14 47pF
C12 0.33uF
RP2GND
TAPE ASIC CIRCUITRY
U21
TAPE 5 ASIC
DATA[00:07]
ADDR[00:15]
C61 0.1uF
C55 0.1uF
C46 0.1uF
C57 0.1uF
T9 WRVCO
T8 RDVCO
T14 PGDELAY
T13 ERR
U22A
U22B
T12 GND
T1 GND
T6 GND

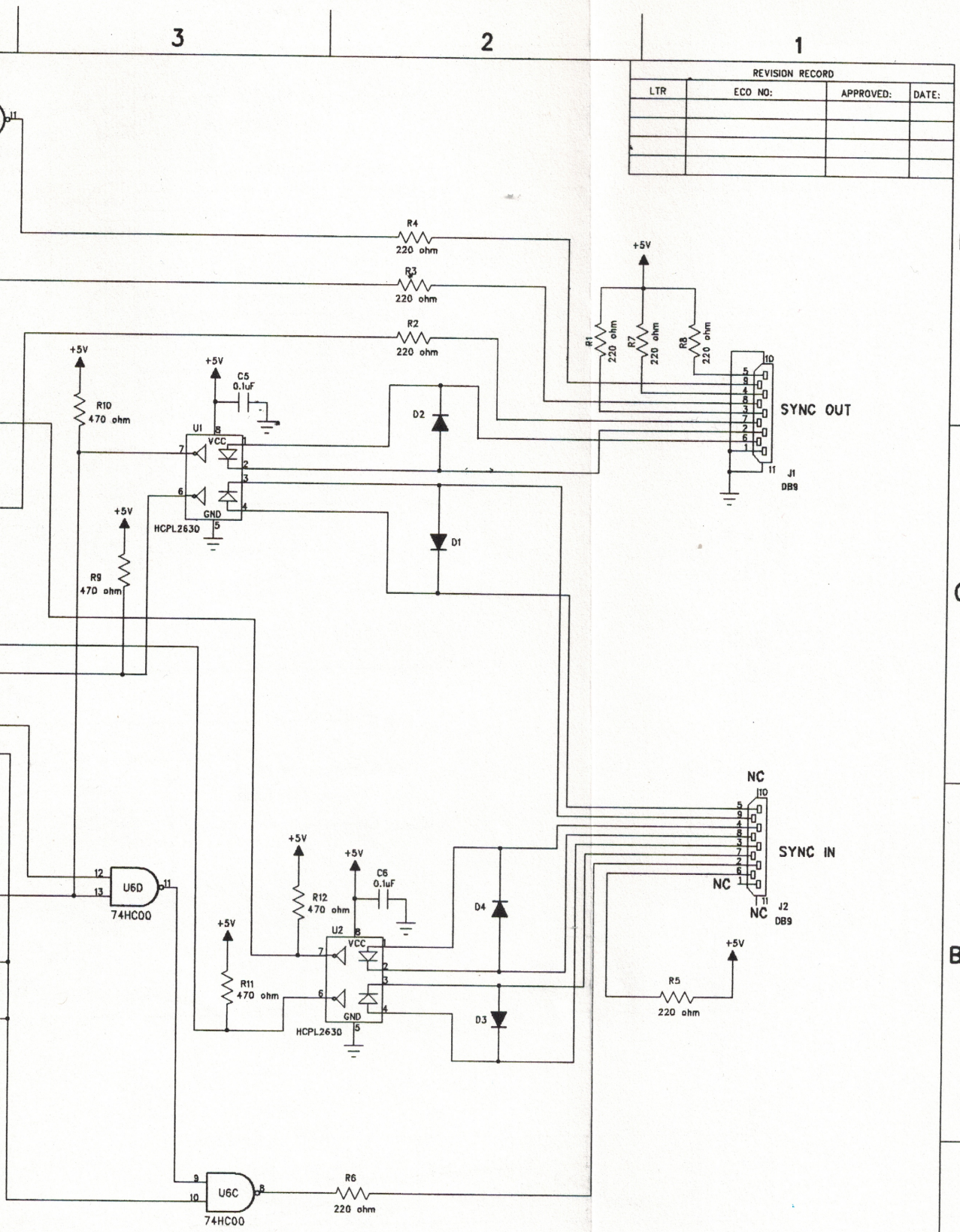

3
2
1
REVISION RECORD
LTR
ECO NO:
APPROVED:
DATE:
MICROPROCESSOR CIRCUITRY
READ CIRCUITRY
AGC SELECT
READ CONNECTOR
U33
80C31
U32
27C512
U28
8Kx8 SRAM
U9
READPRE2 ASIC
U14
LM78L05CM
U13
VCO ASIC
U19D
LM339
U22A
U22B
74HC04
Q8
MBT4401
B1
3V BATT
D9
D10
J7
J8
R101
4.7k
R92
1K
R91
10K
R44
10 ohm
R72
2k
R55
1K
R63
100K
R59
4.7k
R23
75 ohm
R22
430 ohm
R31
4.7k
R30
20k
R35
3k
R34
10 ohm
R29
10K
R28
1K
C74
0.1uF
C78
0.1uF
C69
0.1uF
C40
0.1uF
C12
0.33uF
C34
0.1uF
C31
68pF
C36
0.33uF
C35
0.1uF
C25
0.1uF
C21
22pF
C32
100pF
C47
0.01uF
C41
10uF,25V
C28
1000pF
C26
1000pF
C22
1000pF
C23
1000pF
L1
6.8uH
L2
8.2uH
C13
47pF
C14
47pF
R21
510 ohm
R20
510 ohm
ADDR[00:15]
DATA[00:07]
+5V
+8V
+5VREAD
RP2GND
PGDELAY
PGIN
WR_CORR
RESET
T2 READIN
T4 SLICE
T8 RDVCO
T9 WRVCO
T15 RP2GND
T16 RP2GND
T12 GND
T1 GND
T6 GND
COMPANY: ALESIS CORP.
TITLE: CDAT PROCESSOR BOARD
MICRO, MEMORY, TAPE ASIC
FPANEL, READ, WRITE
DRAWN: G. G.
DATED: 7/12/95
REV. B
QUALITY CONTROL:
RELEASED:
CODE:
SIZE: C
DRAWING NO:
REV:
SCALE:
SHEET: 1 OF 4

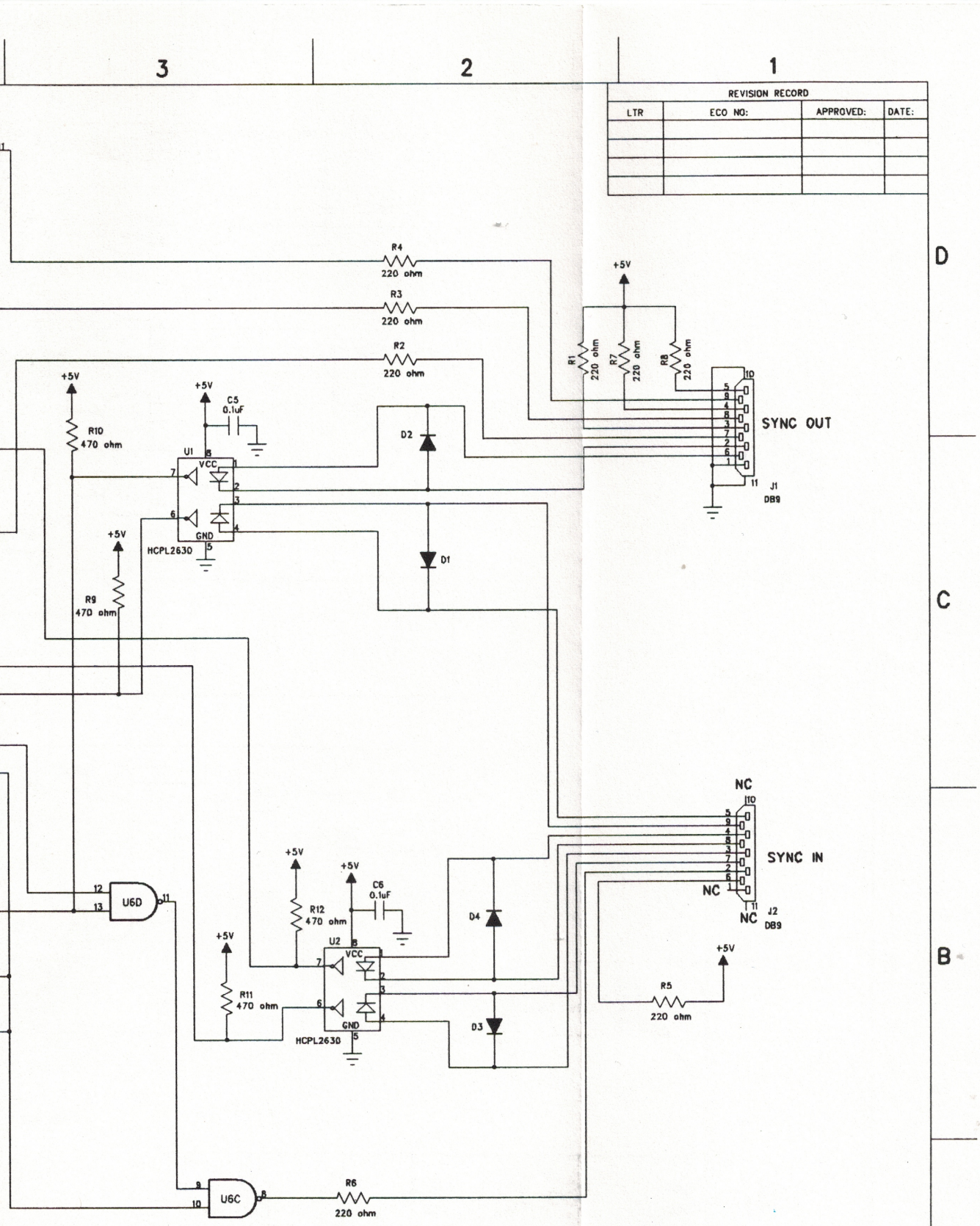

3
2
1
REVISION RECORD
LTR
ECO NO:
APPROVED:
DATE:
T5 DIGVCO
+5V
C2 0.1uF
J3
GND
+5V
DIGOUT
DIGIN
GND
+5V
DIG IN/OUT
C1 0.1uF
PROCESSOR +5V
U37 LM7805
C81 0.1uF
C82 10uF,25V
C87 47uF,16V
C84 0.1uF
AUDIO +5V
AUD_+5V
U31 LM7805
C74 0.1uF
C72 47uF,16V
C73 0.1uF
AGND
C88 470uF,35V MTRGND
+20V
AUD_+20V
+8V
AUD_+8V
GND
AGND
-30V
J13
TO POWER SUPPLY
R113 100 ohm,2W
C86 470uF,35V
C89 0.1uF
TO AUDIO BOARD
J6
DAC 1/2
ADC 1/2
ADC 3/4
DAC 3/4
AUD 48K
ADC 5/6
DAC 5/6
ADC 7/8
DAC 7/8
MUTE
BIT CLK
SMPVCO
RESET
ADA_SEL
LINEAR HEAD CIRCUITRY
T12 LINADJ
R56 2k
U18B LM324
R46 470 ohm
C42 22uF,25V
R48 1K
R47 24k
LINHEAD+
LINHEAD-
D5
R53 220k
R49 1K
C43 22uF,25V
R54 1M
C50 0.1uF
SERVO ASIC CIRCUITRY
CAPSTAN CONTROL CIRCUITRY
R73 2k
U23D
U20B LM339
R74 470 ohm
CAPFGIN
C53 0.1uF
R66 100K
R67 100 ohm
+20VM
R61 1K
U18A LM324
Q5 TIP31A
C49 0.1uF
Q4 TIP32A
R52 3k
R51 1K
MTRGND
D6
CAPCV
DRUMCV
DRUMFGRAW
CONTROL CIRCUITRY
COMPANY: ALESIS CORP.
TITLE: CDAT PROCESSOR BOARD
AUSY, SERVO, SMPVCO, DIGVCO
ADA, POWER, DIG CONNECTORS
DRAWN: G.G.
DATED: 8/7/95
REV. C
DATED:
QUALITY CONTROL:
DATED:
RELEASED:
DATED:
CODE:
SIZE: C
DRAWING NO:
REV:
SCALE:
SHEET: 2 OF 4
D
C
B
A

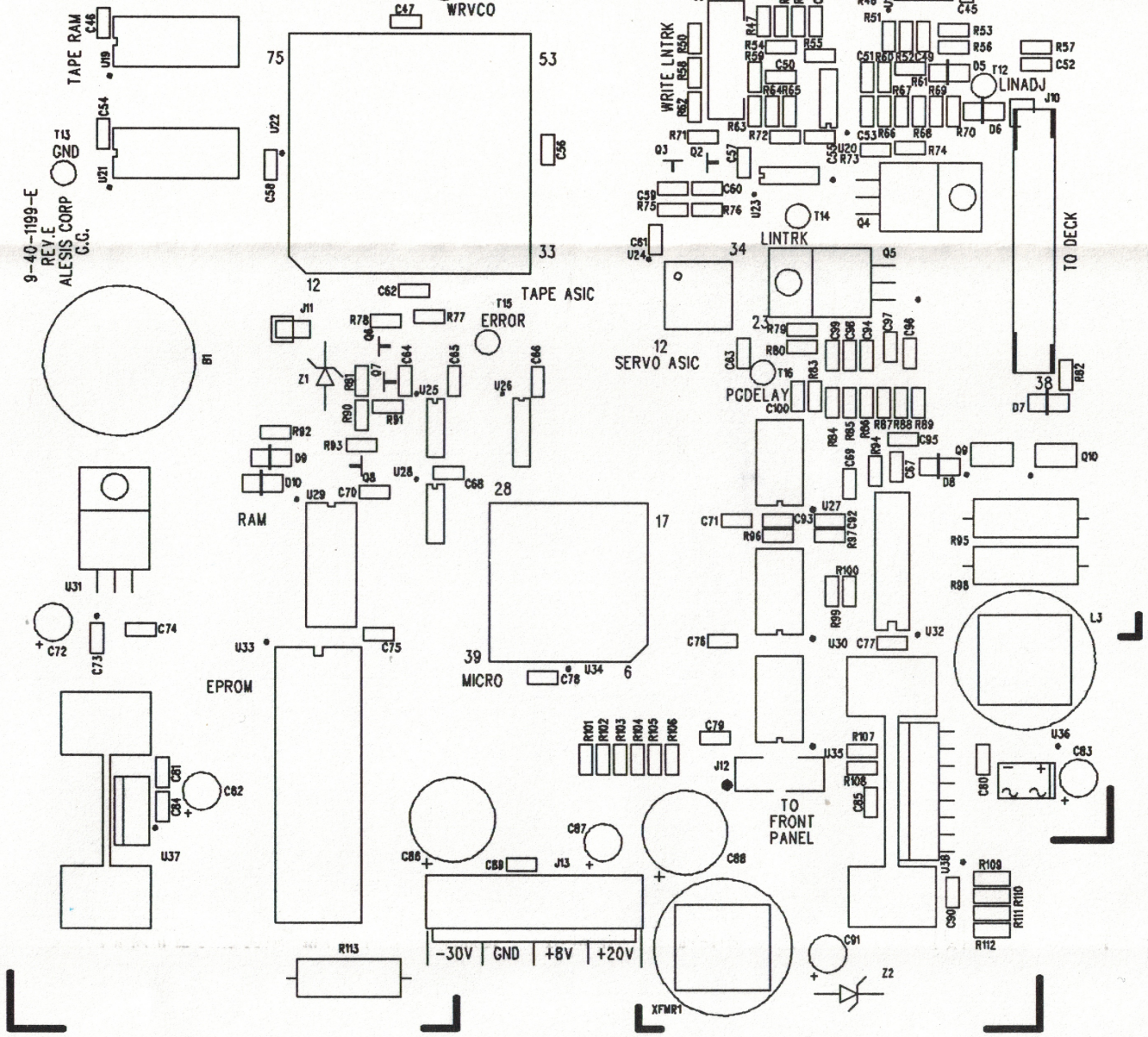

6
5
4
D
C
B
A
U18D
LM324
U18C
LM324
+5V
COMP
R38 3.9k
R37 1K
R39 1.65k 1x
R42 2.43k 1x
R41 1K
R43 2.05k 1x
Q1 MBT4403
R40 1K
SYNC_SEL_C
SYNC_SEL_B
SYNC_SEL_A
U7
SYNC_SEL
DATA[00:07]
74HC574
R15 16k
R16 8.2k
R17 3.9k
R18 2k
R19 1K
C3 0.01uF
C4 0.01uF
C15 0.1uF
J5
NC
LOCATE/LRC
J4
PUNCH-IN
R14 3.9k
R13 1K
C7 0.1uF
U30
RD
DECK1_SEL
COMP
USER_OUT1
USER_OUT2
TACH
END_SENSOR
START_SENSOR
ADA_SEL
PUNCH-IN
74HC541
C76 0.1uF
R99 270k
R100 100K
R97 220k
R96 220k
VFD FILAMENT CIRCUITRY
R110 12K
R111 12K
R112 12K
R109 12K
MTRGND
XFMR1
FIL_B
FIL_A
XFMR C.T.
R107 100 ohm
Z2 1N4738A,8.2V
-30V
C91 10uF,25V
C85 0.01uF
PWM2
R79 470 ohm
Q9 PZT2222A
+20VM
D8
BRAKE CIRCUITR
RESET
LD/THRDMOT_SEL
U35
74HC273
A16
MUTE
DIR
RESET_EN
U32
LM18293
C79 0.1uF
C77 0.1uF
LD/THRD MOT
U27
DECK0_SEL
DEWSENSOR
ENDLOAD
STARTLOAD
TPTHRMODE
CAPONMODE
TPUNTHRMODE
RECEN
CASSPRES
R89 4.7k
R88 4.7k
R94 390k
R83 4.7k
R84 4.7k
R85 4.7k
R86 4.7k
R87 4.7k
C71 0.1uF
C69 0.01uF


3
2
1
REVISION RECORD
LTR
ECO NO:
APPROVED:
DATE:
D
C
B
A
REEL MOTOR CIRCUITRY
BRAKE CIRCUITRY
LD/THRD MOTOR CIRCUITRY
+20VM
+5VM
MTRGND
C90
0.1uF
U38
L298N
VS
ENA
IN3
IN4
IN1
IN2
OUT4
OUT3
OUT1
OUT2
SENSB
ENB
SENSA
VSS
GND
RESET_EN
PWM3
DIR
AUD_48K
R107
100 ohm
R108
100 ohm
C85
0.01uF
C80
0.1uF
REELMOTOR-
L3
480uH
REELMOTOR+
C83
10uF,25V
U36
EDF1DS
V1
V2
D8
D7
R80
470 ohm
PWM1
Q10
PZT2222A
R98
24 ohm
THREADMOTOR+
R95
24 ohm
LOADMOTOR+
U32
LM18293
EN1
EN2
IN1
IN2
IN3
IN4
OP1
OP2
OP4
OP3
VSS
GND
VCC
C67
0.1uF
C77
0.1uF
DRUM+20V
BRK+20V
TACH+20V
LED+5V
PGIN
GND
DRUMFGRAW
DRUMCV
DRUMFGGND
NC
DRUMGND
THREADMOTOR+
THREADMOTOR-
CASSPRES
RECGND
RECEN
TAKUPBRK
SUPPLYBRK
TPUNTHRMODE
MODEGND
CAPONMODE
TPTHRMODE
STARTLOAD
LOSENS+5V
LOADMOTOR-
ENDLOAD
START_SENSOR
END_SENSOR
LOADMOTOR+
TACHIN
TACHGND
REELMOTOR+
REELMOTOR-
DEWSENSOR
CAPFGIN
GND
CAPCV
CAPFGGND
CAPCVGND
LEDGND
R82
75 ohm
J10
TO
DECK
COMPANY: ALESIS CORP.
TITLE: CDAT PROCESSOR BOARD
DECK CONNECTIONS, FOOTSWITCH, LRC
VFD FRONT PANEL FILAMENT
DRAWN: G. G.
DATED: 8/7/95
REV. C
DATED:
QUALITY CONTROL:
DATED:
RELEASED:
DATED:
CODE:
SIZE: C
DRAWING NO:
REV:
SCALE:
SHEET: 3 OF 4

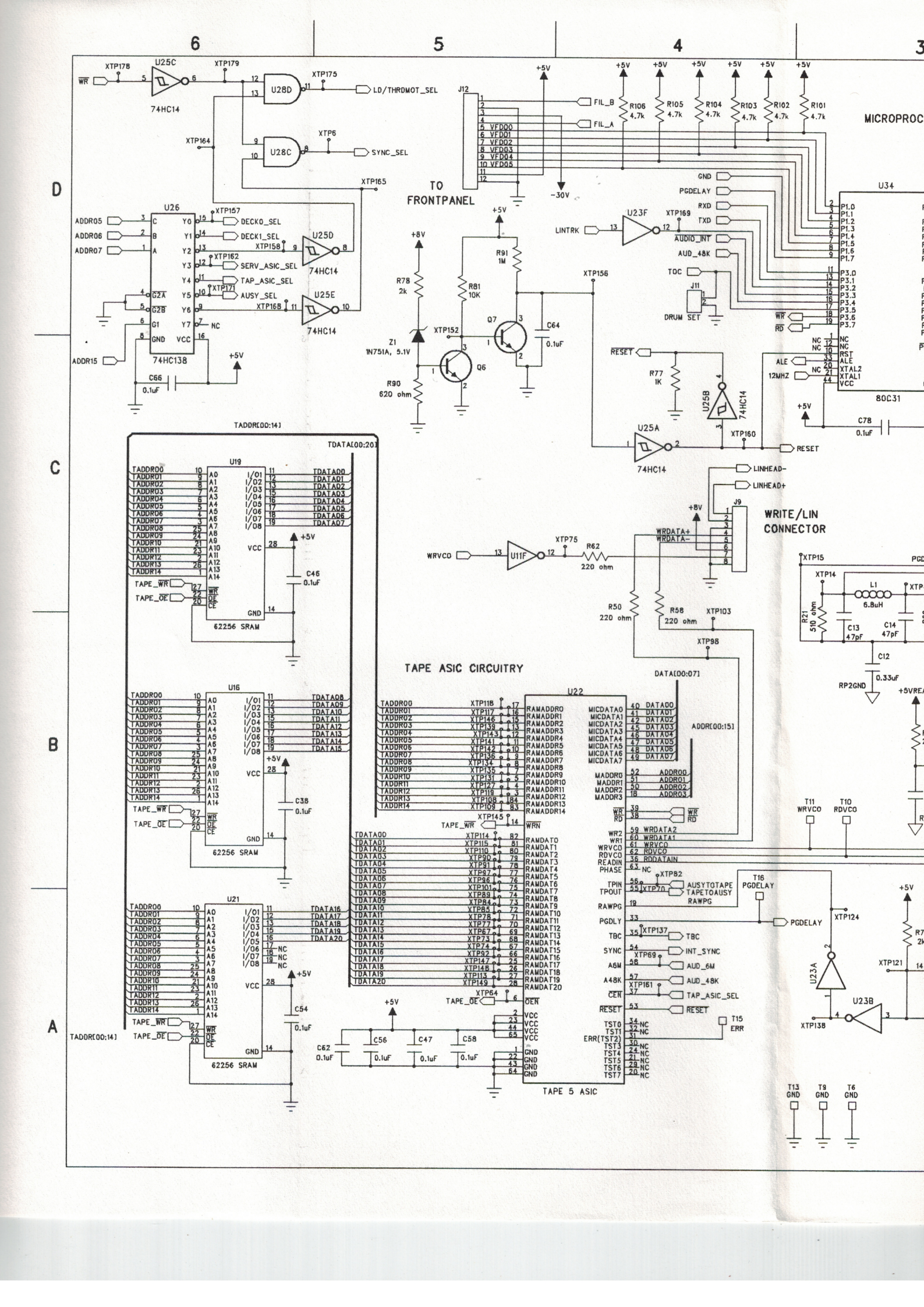

6
5
4
3
D
C
B
A
SYNC_SEL_A
U10C
74HCU04
U3A
74HC00
U3D
74HC00
TXD
U3B
74HC00
INT_SYNC
U3C
74HC00
U4D
74HC00
EXT_SYNC
U4A
74HC00
+5V
R10
470 ohm
AUD_48K
U4B
74HC00
EXT_48K
U4C
74HC00
SYNC_SEL_B
U10D
74HCU04
U5A
74HC00
+5V
R9
470 ohm
HCPL2
U38B
74HC74
U10E
74HCU04
U6B
74HC00
U24F
74HC14
TXD
RXD
U5B
74HC00
U5D
74HC00
SYNC_SEL_C
U5C
74HC00
U6D
74HC00
U6A
74HC00
+20V
C44
0.1uF
U17E
LM324
U19E
LM339
C54
0.1uF
+5V
U24G
74HC14
C64
0.1uF
U10G
74HCU04
C16
0.1uF
C56
0.1uF
U22G
74HC04
U38C
74HC74
C77
0.1uF
+5V
C9
0.1uF
U4E
74HC00
U3E
74HC00
C8
0.1uF
U5E
74HC00
C10
0.1uF
U6E
74HC00
C11
0.1uF
U27E
74HC00
C67
0.1uF

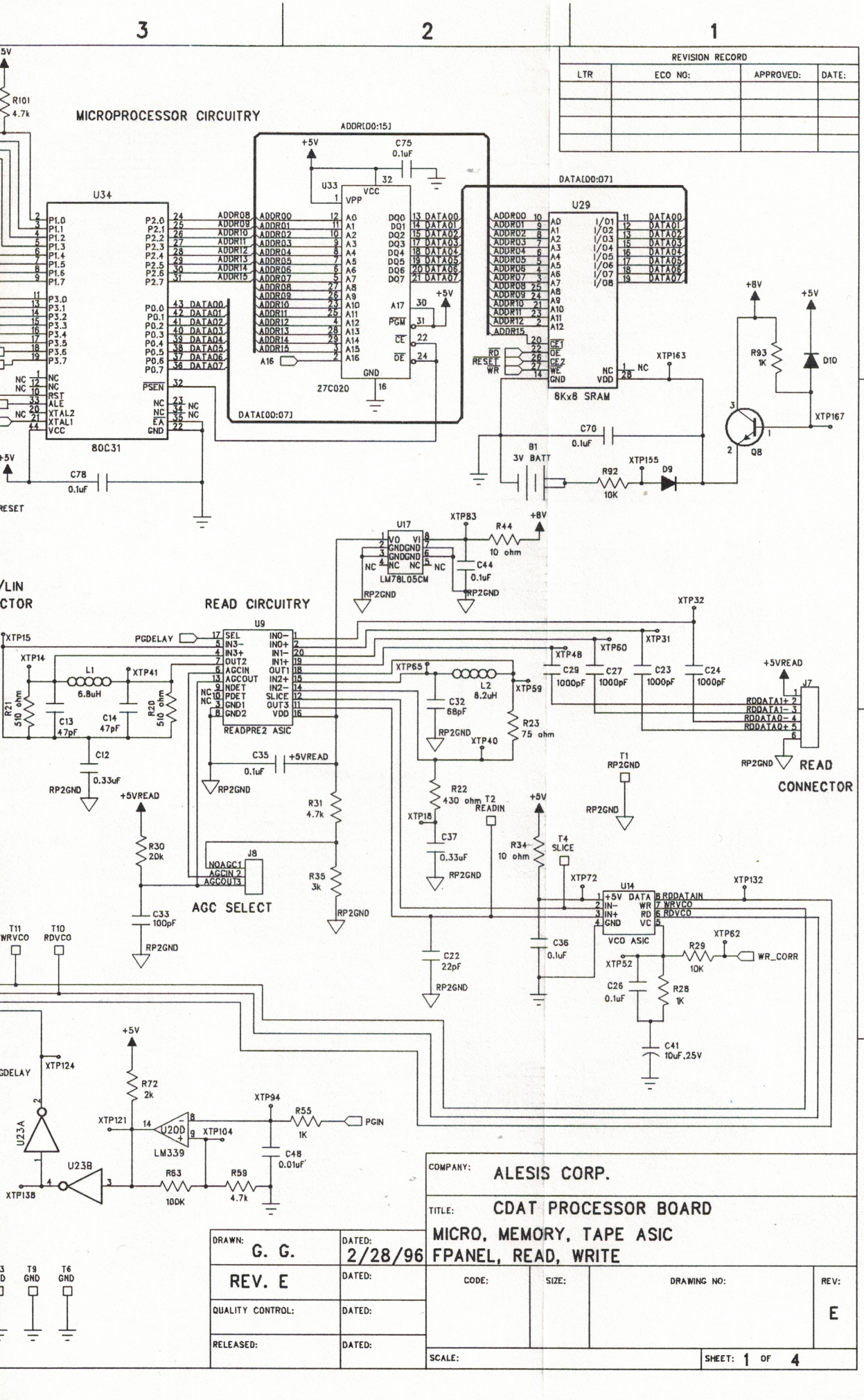

3
2
1
D
C
B
A
REVISION RECORD
LTR
ECO NO:
APPROVED:
DATE:
R4
220 ohm
R3
220 ohm
R2
220 ohm
+5V
R1
220 ohm
R7
220 ohm
R8
220 ohm
SYNC OUT
J1
DB9
R10
470 ohm
C5
0.1uF
U1
VCC
GND
HCPL2630
D2
D1
R9
470 ohm
NC
SYNC IN
J2
DB9
C6
0.1uF
R12
470 ohm
U2
HCPL2630
D4
D3
R11
470 ohm
R5
220 ohm
U6D
74HC00
U6C
74HC00
R6
220 ohm
COMPANY: ALESIS CORP.
TITLE: CDAT PROCESSOR BOARD
SYNC IN / SYNC OUT, CHIP PWR/GND
DRAWN: G. G.
DATED: 7/12/95
REV.B
DATED:
QUALITY CONTROL:
DATED:
RELEASED:
DATED:
CODE:
SIZE:
DRAWING NO:
REV:
SCALE:
SHEET: 4 OF 4

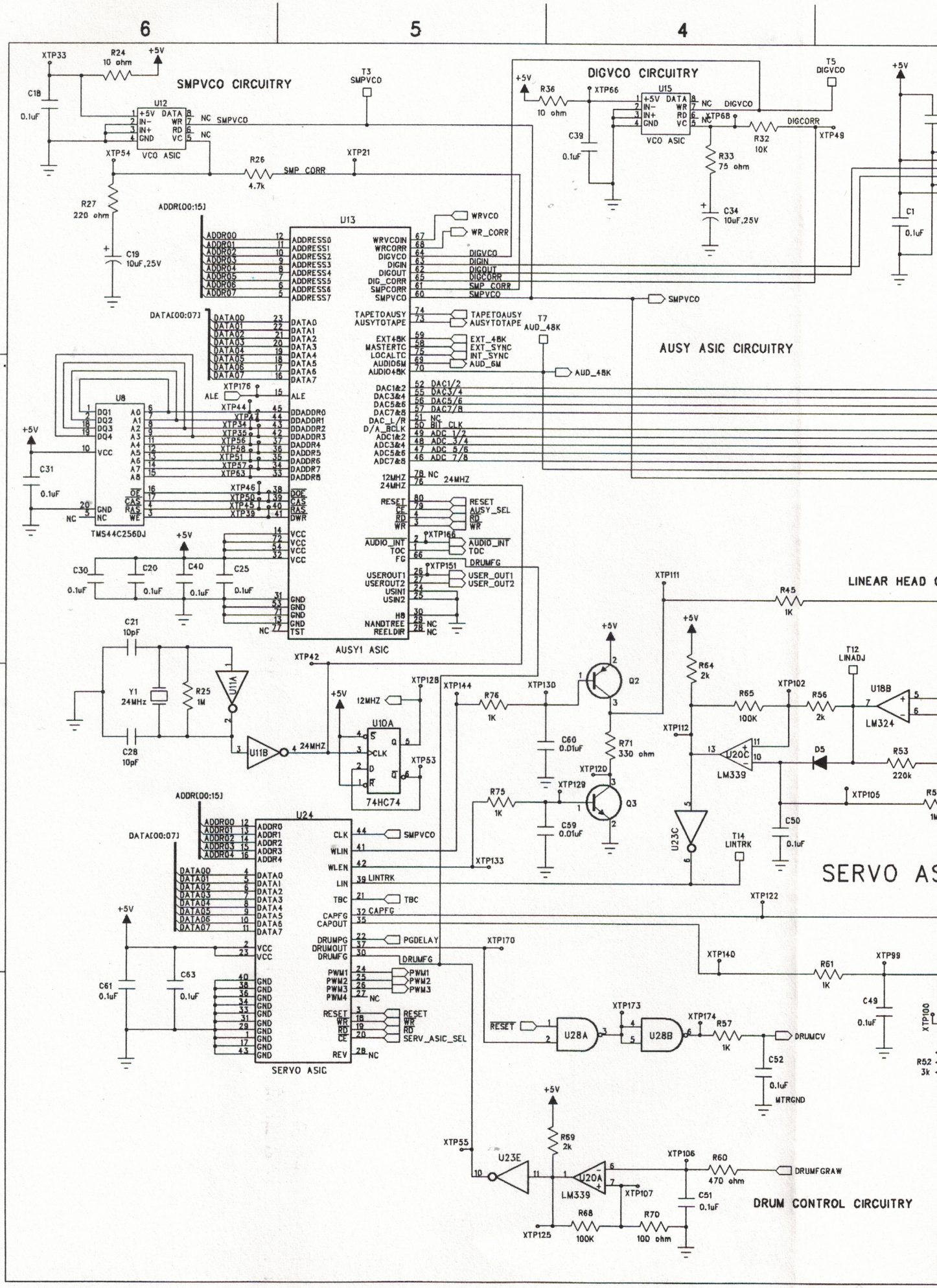

3
2
1
REVISION RECORD
LTR
ECO NO:
APPROVED:
DATE:
D
C
B
A
R4
220 ohm
R3
220 ohm
R2
220 ohm
+5V
R1
220 ohm
R7
220 ohm
R8
220 ohm
SYNC OUT
J1
DB9
R10
470 ohm
U1
VCC
GND
HCPL2630
C5
0.1uF
D2
D1
R9
470 ohm
NC
SYNC IN
J2
DB9
U6D
U6C
U2
C6
0.1uF
R12
470 ohm
R11
470 ohm
D4
D3
R5
220 ohm
R6
220 ohm
COMPANY: ALESIS CORP.
TITLE: CDAT PROCESSOR BOARD
SYNC IN / SYNC OUT, CHIP PWR/GND
DRAWN: G. G.
DATED: 8/7/95
REV.C
DATED:
QUALITY CONTROL:
DATED:
RELEASED:
DATED:
CODE:
SIZE:
DRAWING NO:
REV:
SCALE:
SHEET: 4 OF 4

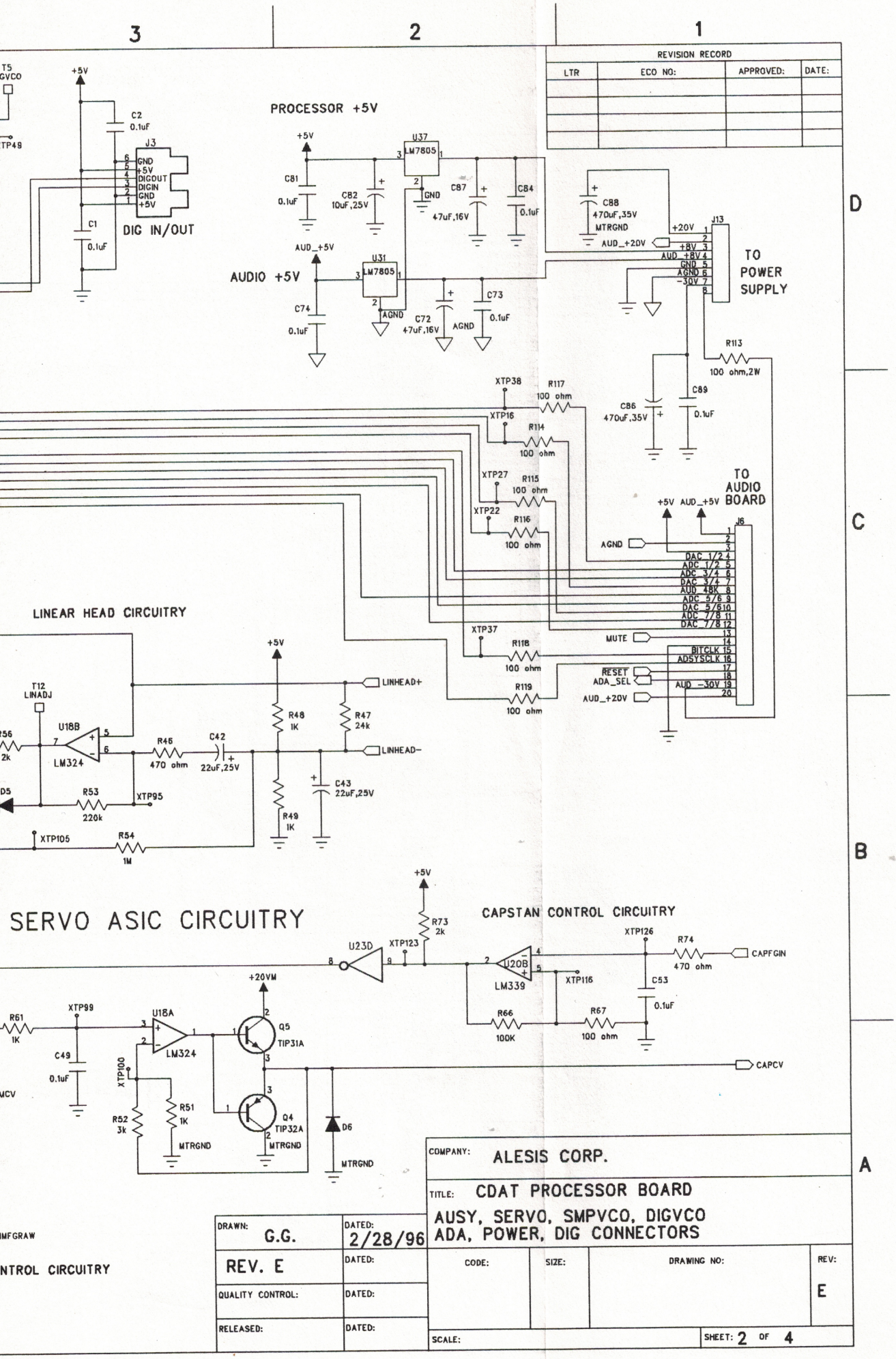

9-40-1199-E
REV.E
ALESIS CORP
C.G.
TAPE RAM
GND
WRVCO
TAPE ASIC
WRITE LNTRK
LINADJ
LINTRK
TO DECK
SERVO ASIC
PGDELAY
ERROR
RAM
EPROM
MICRO
TO
FRONT
PANEL
-30V
GND
+8V
+20V
XFMR1

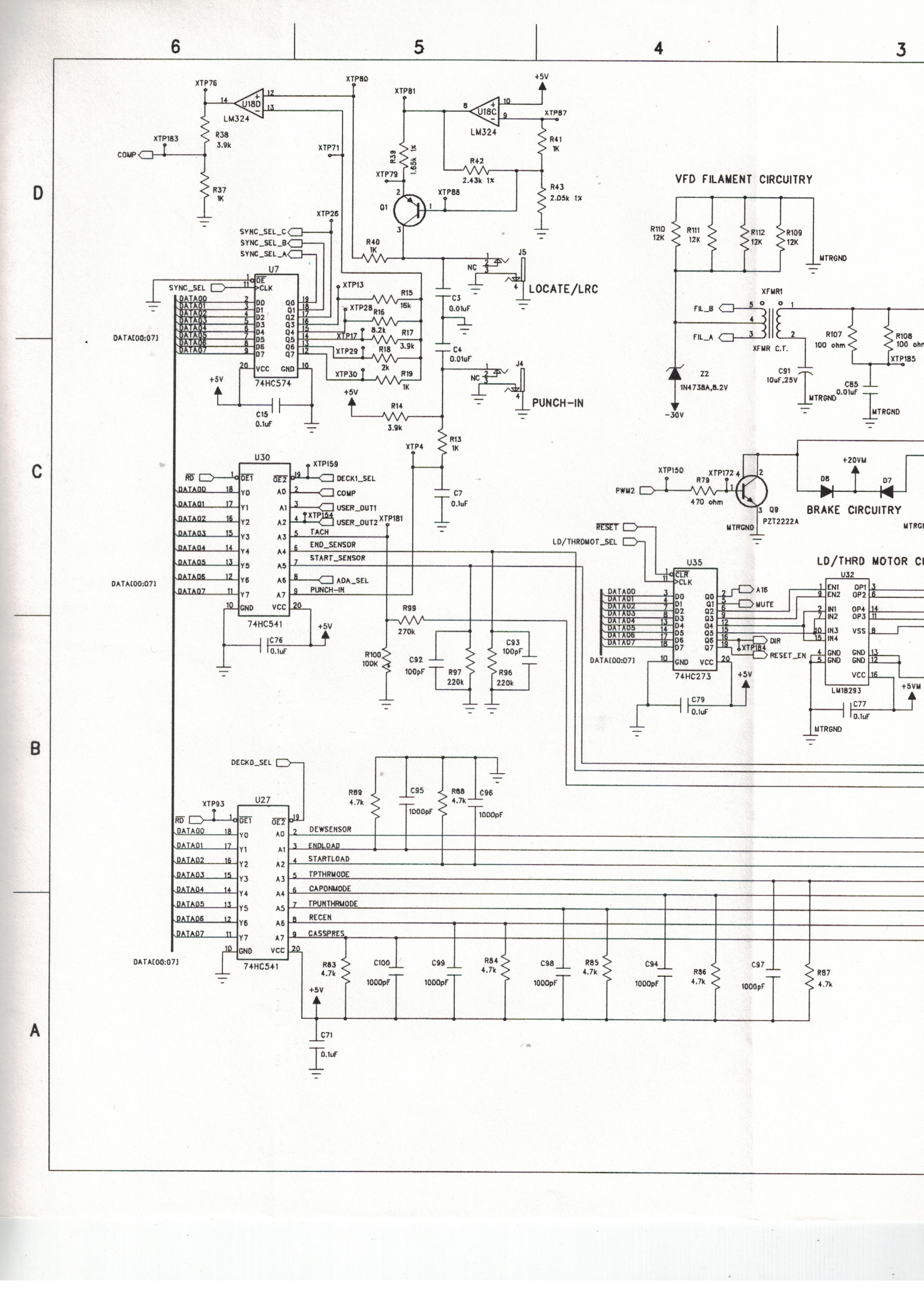
A/W 09-40-1199 REV.E "TOPSILK" LAYER 1

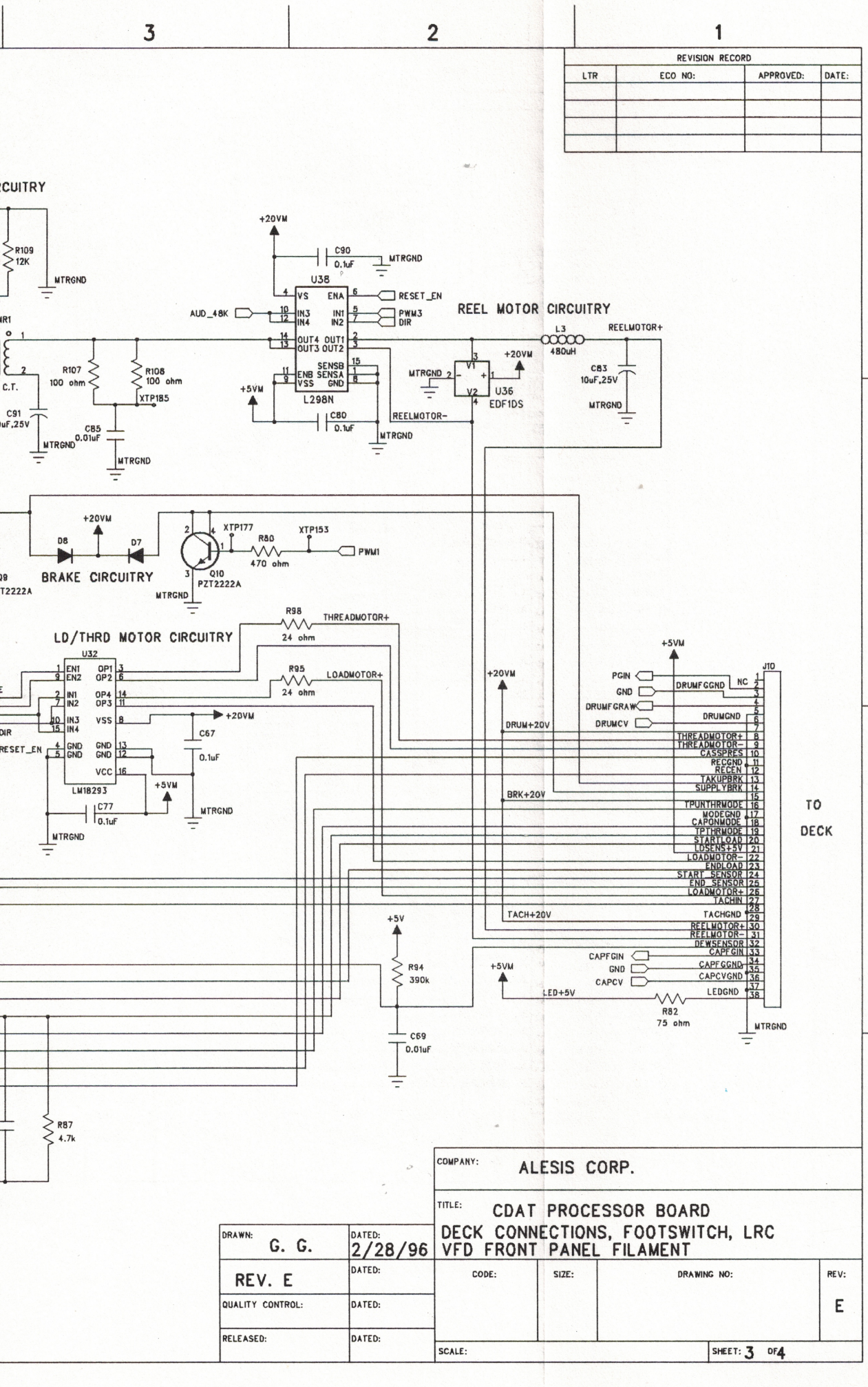

6
5
4
3
D
C
B
A
U25C
74HC14
U28D
U28C
LD/THRDMOT_SEL
SYNC_SEL
TO FRONTPANEL
MICROPROC
U26
74HC138
U25D
U25E
DECK0_SEL
DECK1_SEL
SERV_ASIC_SEL
TAP_ASIC_SEL
AUSY_SEL
U23F
U34
80C31
DRUM SET
U25B
U25A
RESET
WRITE/LIN CONNECTOR
LINHEAD-
LINHEAD+
U11F
U19
U16
U21
62256 SRAM
TAPE ASIC CIRCUITRY
U22
TAPE 5 ASIC
AUSYTOTAPE
TAPETOAUSY
RAWPG
PGDELAY
TBC
INT_SYNC
AUD_6M
AUD_48K
TAP_ASIC_SEL
RESET
ERR
U23A
U23B

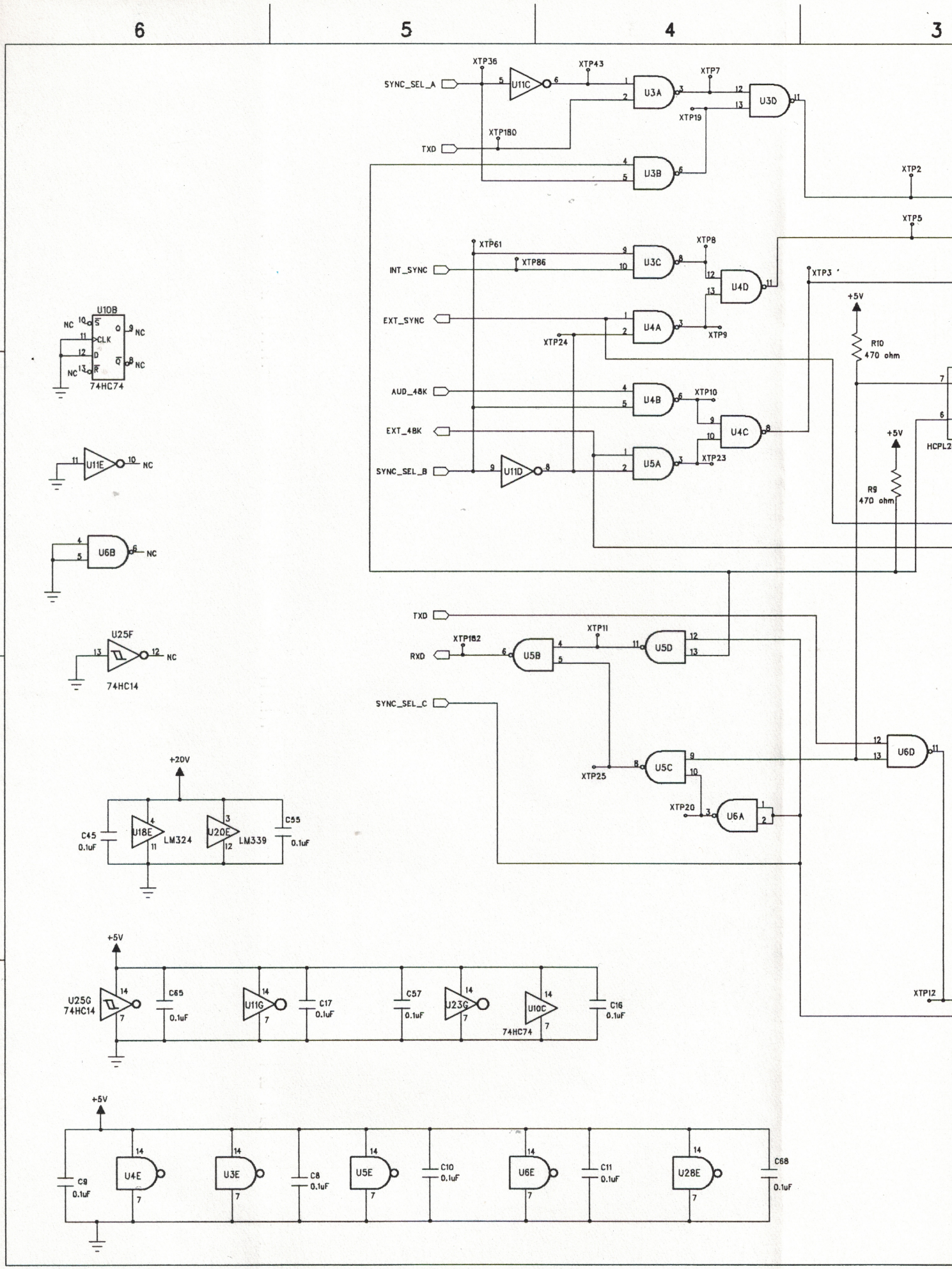

3
2
1
REVISION RECORD
LTR
ECO NO:
APPROVED:
DATE:
MICROPROCESSOR CIRCUITRY
READ CIRCUITRY
AGC SELECT
READ CONNECTOR
U34
80C31
U33
27C020
U29
8Kx8 SRAM
U9
READPRE2 ASIC
U17
LM78L05CM
U14
VCO ASIC
U20D
LM339
U23A
U23B
ADDR[00:15]
DATA[00:07]
+5V
+8V
+5VREAD
RP2GND
RESET
R101 4.7k
C78 0.1uF
C75 0.1uF
C70 0.1uF
B1 3V BATT
R92 10K
D9
R93 1K
D10
Q8
XTP167
XTP163
XTP155
R44 10 ohm
C44 0.1uF
XTP83
XTP32
XTP31
XTP60
XTP48
XTP59
XTP65
XTP15
XTP14
XTP41
L1 6.8uH
L2 8.2uH
R21 510 ohm
R20 510 ohm
C13 47pF
C14 47pF
C12 0.33uF
C29 1000pF
C27 1000pF
C23 1000pF
C24 1000pF
C32 68pF
R23 75 ohm
XTP40
C35 0.1uF
R31 4.7k
R30 20k
R35 3k
C33 100pF
R22 430 ohm
C37 0.33uF
XTP18
T2 READIN
T1
T4 SLICE
R34 10 ohm
XTP72
XTP132
C36 0.1uF
C22 22pF
XTP52
C26 0.1uF
R28 1K
R29 10K
XTP62
WR_CORR
C41 10uF,25V
J7
RDDATA1+ 2
RDDATA1- 3
RDDATA0- 4
RDDATA0+ 5
J8
NOAGC1
AGCIN 2
AGCOUT3
PGDELAY
XTP124
R72 2k
XTP94
R55 1K
PGIN
XTP121
XTP104
C48 0.01uF
R63 100K
R59 4.7k
XTP138
T11 WRVCO
T10 RDVCO
T9 GND
T6 GND
COMPANY: ALESIS CORP.
TITLE: CDAT PROCESSOR BOARD
MICRO, MEMORY, TAPE ASIC
FPANEL, READ, WRITE
DRAWN: G. G.
DATED: 2/28/96
REV. E
QUALITY CONTROL:
RELEASED:
CODE:
SIZE:
DRAWING NO:
REV: E
SCALE:
SHEET: 1 OF 4

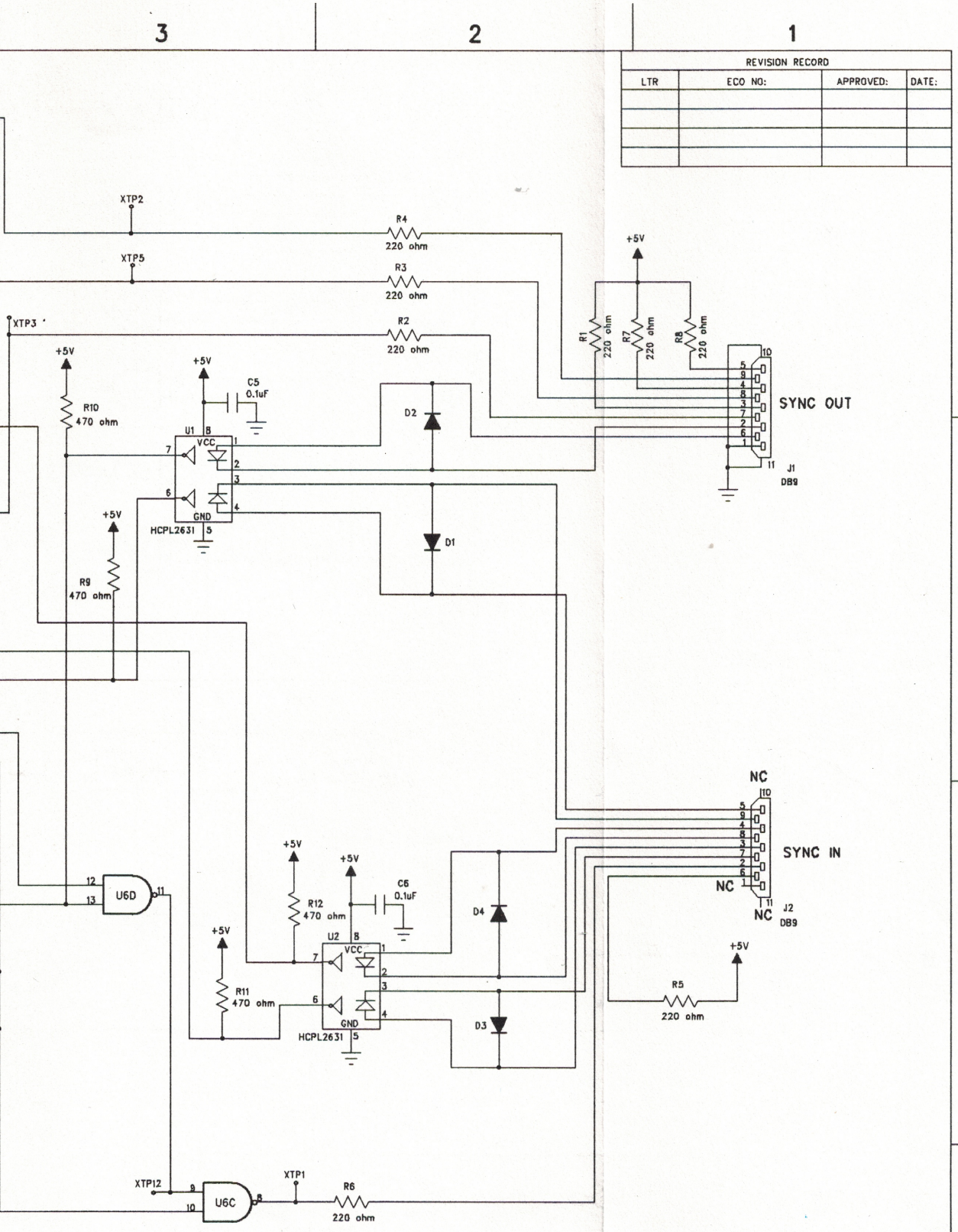

SMPVCO CIRCUITRY
DIGVCO CIRCUITRY
AUSY ASIC CIRCUITRY
LINEAR HEAD
SERVO AS
DRUM CONTROL CIRCUITRY
AUSY1 ASIC
SERVO ASIC
TMS44C256DJ
74HC74
LM339
LM324
VCO ASIC
U8
U10A
U11A
U11B
U12
U13
U15
U18B
U20A
U20C
U23C
U23E
U24
U28A
U28B
Q2
Q3
Y1
24MHz
12MHZ
24MHZ
ADDR[00:15]
DATA[00:07]
SMP_CORR
DIGCORR
DRUMFG
DRUMCV
DRUMFGRAW
MTRGND
SERV_ASIC_SEL
PGDELAY
TBC
LINTRK
CAPFG
USER_OUT1
USER_OUT2
AUDIO_INT
TOC
AUD_48K
EXT_48K
EXT_SYNC
INT_SYNC
AUD_6M
RESET
AUSY_SEL
WRVCO
WR_CORR
PWM1
PWM2
PWM3
SERV_ASIC_SEL
T3 SMPVCO
T5 DIGVCO
T7 AUD_48K
T12 LINADJ
T14 LINTRK
R24 10 ohm
R25 1M
R26 4.7k
R27 220 ohm
R32 10K
R33 75 ohm
R36 10 ohm
R45 1K
R53 220k
R56 2k
R57 1K
R60 470 ohm
R61 1K
R64 2k
R65 100K
R68 100K
R69 2k
R70 100 ohm
R71 330 ohm
R75 1K
R76 1K
C18 0.1uF
C19 10uF,25V
C20 0.1uF
C21 10pF
C25 0.1uF
C28 10pF
C30 0.1uF
C31 0.1uF
C34 10uF,25V
C39 0.1uF
C40 0.1uF
C49 0.1uF
C50 0.1uF
C51 0.1uF
C52 0.1uF
C59 0.01uF
C60 0.01uF
C61 0.1uF
C63 0.1uF
XTP33
XTP54
XTP21
XTP66
XTP68
XTP49
XTP176
XTP44
XTP46
XTP42
XTP128
XTP144
XTP130
XTP111
XTP102
XTP112
XTP120
XTP129
XTP105
XTP133
XTP122
XTP140
XTP99
XTP170
XTP173
XTP174
XTP55
XTP106
XTP107
XTP125
XTP151
XTP166
XTP53

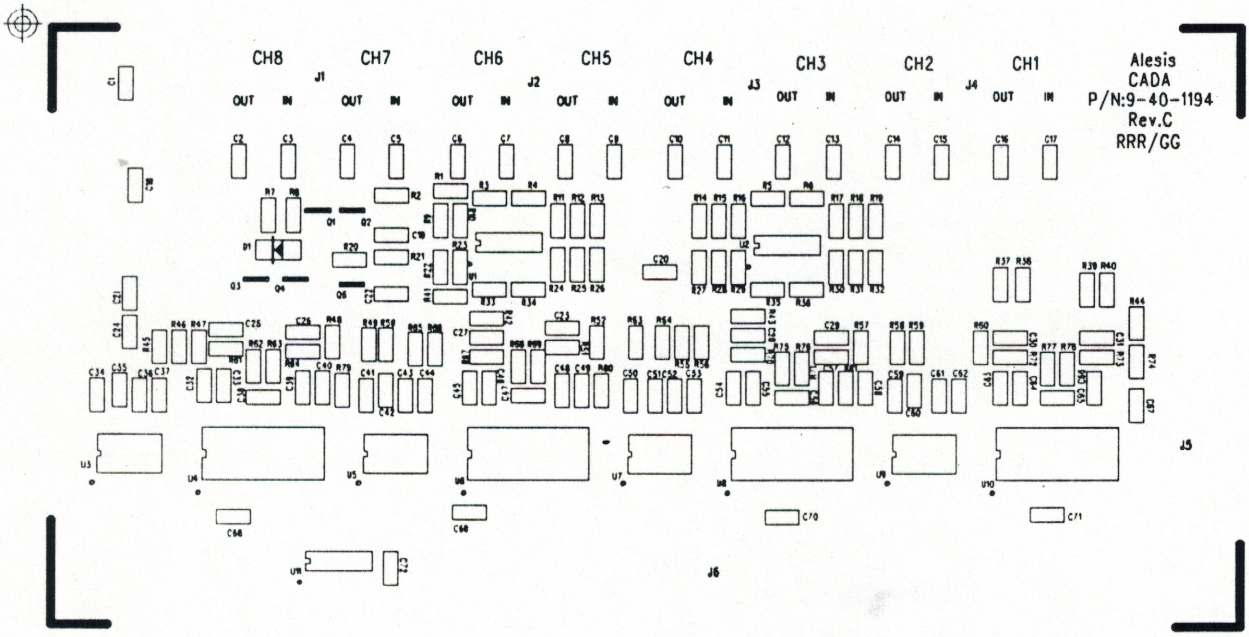

3
2
1
REVISION RECORD
LTR
ECO NO:
APPROVED:
DATE:
PROCESSOR +5V
+5V
U37
LM7805
C81
0.1uF
C82
10uF,25V
C87
47uF,16V
C84
0.1uF
GND
C2
0.1uF
J3
GND
+5V
DIGOUT
DIGIN
GND
+5V
DIG IN/OUT
C1
0.1uF
AUD_+5V
AUDIO +5V
U31
LM7805
C74
0.1uF
C72
47uF,16V
AGND
C73
0.1uF
C88
470uF,35V
MTRGND
AUD_+20V
+20V
+8V
AUD_+8V
GND
AGND
-30V
J13
TO POWER SUPPLY
R113
100 ohm,2W
C86
470uF,35V
C89
0.1uF
XTP38
R117
100 ohm
XTP16
R114
100 ohm
XTP27
R115
100 ohm
XTP22
R116
100 ohm
TO AUDIO BOARD
+5V
AUD_+5V
J6
AGND
DAC_1/2
ADC_1/2
ADC_3/4
DAC_3/4
AUD_48K
ADC_5/6
DAC_5/6
ADC_7/8
DAC_7/8
MUTE
BITCLK
ADSYSCLK
RESET
ADA_SEL
AUD_-30V
AUD_+20V
XTP37
R118
100 ohm
R119
100 ohm
LINEAR HEAD CIRCUITRY
+5V
T12
LINADJ
U18B
LM324
R46
470 ohm
C42
22uF,25V
LINHEAD+
LINHEAD-
R48
1K
R47
24k
C43
22uF,25V
R49
1K
R53
220k
XTP95
XTP105
R54
1M
SERVO ASIC CIRCUITRY
CAPSTAN CONTROL CIRCUITRY
+5V
R73
2k
U23D
XTP123
U20B
LM339
XTP126
R74
470 ohm
CAPFGIN
XTP116
C53
0.1uF
R66
100K
R67
100 ohm
+20VM
XTP99
R61
1K
U18A
LM324
C49
0.1uF
Q5
TIP31A
XTP100
R52
3k
R51
1K
Q4
TIP32A
MTRGND
D6
CAPCV
MFGRAW
NTROL CIRCUITRY
COMPANY: ALESIS CORP.
TITLE: CDAT PROCESSOR BOARD
AUSY, SERVO, SMPVCO, DIGVCO
ADA, POWER, DIG CONNECTORS
DRAWN: G.G.
DATED: 2/28/96
REV. E
DATED:
QUALITY CONTROL:
DATED:
RELEASED:
DATED:
CODE:
SIZE:
DRAWING NO:
REV: E
SCALE:
SHEET: 2 OF 4
D
C
B
A


6
5
4
3
D
C
B
A
VFD FILAMENT CIRCUITRY
LOCATE/LRC
PUNCH-IN
BRAKE CIRCUITRY
LD/THRD MOTOR CI
LM324
74HC574
74HC541
74HC273
LM18293
PZT2222A
1N4738A,8.2V
XFMR C.T.
DATA[00:07]
MTRGND
-30V
+5V
+20VM
+5VM


3
2
1
REVISION RECORD
LTR
ECO NO:
APPROVED:
DATE:
D
C
B
A
REEL MOTOR CIRCUITRY
BRAKE CIRCUITRY
LD/THRD MOTOR CIRCUITRY
+20VM
+5VM
+5V
MTRGND
U38
L298N
U36
EDF1DS
U32
LM18293
U10
L3
480uH
REELMOTOR+
REELMOTOR-
AUD_48K
RESET_EN
PWM3
DIR
PWM1
R109
12K
R107
100 ohm
R108
100 ohm
XTP185
C91
C85
0.01uF
C90
0.1uF
C80
0.1uF
C83
10uF,25V
D8
D7
XTP177
XTP153
R80
470 ohm
Q10
PZT2222A
R98
24 ohm
THREADMOTOR+
R95
24 ohm
LOADMOTOR+
C67
0.1uF
C77
0.1uF
R94
390k
C69
0.01uF
R82
75 ohm
R87
4.7k
J10
PGIN
GND
DRUMFGRAW
DRUMCV
DRUMFGGND
NC
DRUMGND
THREADMOTOR+
THREADMOTOR-
CASSPRES
RECGND
RECEN
TAKUPBRK
SUPPLYBRK
TPUNTHRMODE
MODEGND
CAPONMODE
TPTHRMODE
STARTLOAD
LDSENS+5V
LOADMOTOR-
ENDLOAD
START_SENSOR
END_SENSOR
LOADMOTOR+
TACHIN
TACHGND
REELMOTOR+
REELMOTOR-
DEWSENSOR
CAPFGIN
CAPFGGND
CAPCVGND
LEDGND
DRUM+20V
BRK+20V
TACH+20V
LED+5V
CAPFGIN
GND
CAPCV
TO
DECK
COMPANY:
ALESIS CORP.
TITLE:
CDAT PROCESSOR BOARD
DECK CONNECTIONS, FOOTSWITCH, LRC
VFD FRONT PANEL FILAMENT
DRAWN:
G. G.
DATED:
2/28/96
REV. E
DATED:
QUALITY CONTROL:
DATED:
RELEASED:
DATED:
CODE:
SIZE:
DRAWING NO:
REV:
E
SCALE:
SHEET: 3 OF 4


6
5
4
3
D
C
B
A
SYNC_SEL_A
TXD
INT_SYNC
EXT_SYNC
AUD_48K
EXT_48K
SYNC_SEL_B
RXD
SYNC_SEL_C
U11C
U3A
U3D
U3B
U3C
U4D
U4A
U4B
U4C
U5A
U11D
U5B
U5D
U5C
U6D
U6A
U10B
U11E
U6B
U25F
74HC14
74HC74
U18E
LM324
U20E
LM339
U25G
U11G
U23G
U10C
U4E
U3E
U5E
U6E
U28E
XTP36
XTP43
XTP7
XTP19
XTP180
XTP2
XTP5
XTP61
XTP86
XTP8
XTP3
XTP9
XTP24
XTP10
XTP23
XTP182
XTP11
XTP25
XTP20
XTP12
R10
470 ohm
R9
470 ohm
HCPL2
+5V
+20V
C45
0.1uF
C55
0.1uF
C65
0.1uF
C17
0.1uF
C57
0.1uF
C16
0.1uF
C9
0.1uF
C8
0.1uF
C10
0.1uF
C11
0.1uF
C68
0.1uF


3
2
1
REVISION RECORD
LTR
ECO NO:
APPROVED:
DATE:
D
C
B
A
XTP2
XTP5
XTP3
R4
220 ohm
R3
220 ohm
R2
220 ohm
+5V
R1
220 ohm
R7
220 ohm
R8
220 ohm
SYNC OUT
J1
DB9
R10
470 ohm
C5
0.1uF
U1
VCC
GND
HCPL2631
D2
D1
R9
470 ohm
NC
SYNC IN
J2
DB9
R12
470 ohm
C6
0.1uF
U2
D4
D3
R11
470 ohm
R5
220 ohm
U6D
U6C
XTP12
XTP1
R6
220 ohm
COMPANY: ALESIS CORP.
TITLE: CDAT PROCESSOR BOARD
SYNC IN / SYNC OUT, CHIP PWR/GND
DRAWN: G. G.
DATED: 2/28/96
REV.E
DATED:
QUALITY CONTROL:
DATED:
RELEASED:
DATED:
CODE:
SIZE:
DRAWING NO:
REV: E
SCALE:
SHEET: 4 OF 4



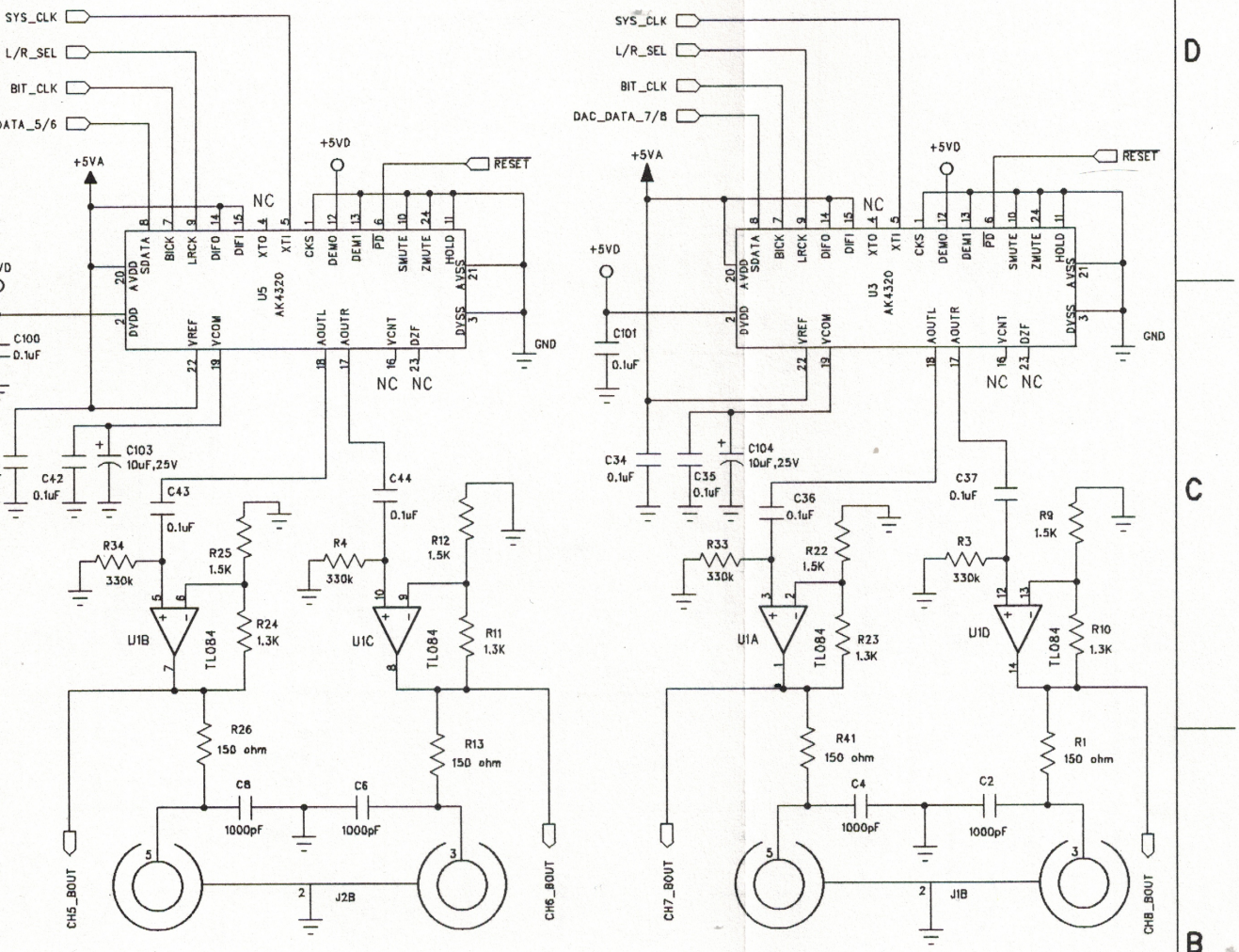
A/W 09-40-1194 "TOPSILK" LAYER1-REV.C

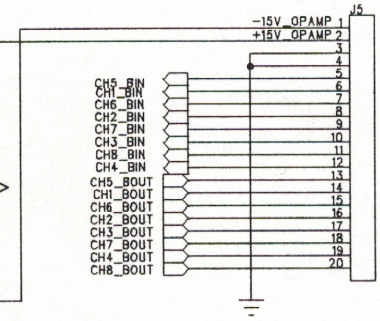
A/W 09-40-1194 "BOTSILK" LAYER4-REV.C

3 2 1

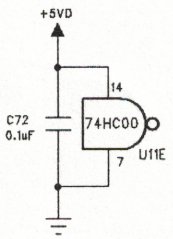
8)

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



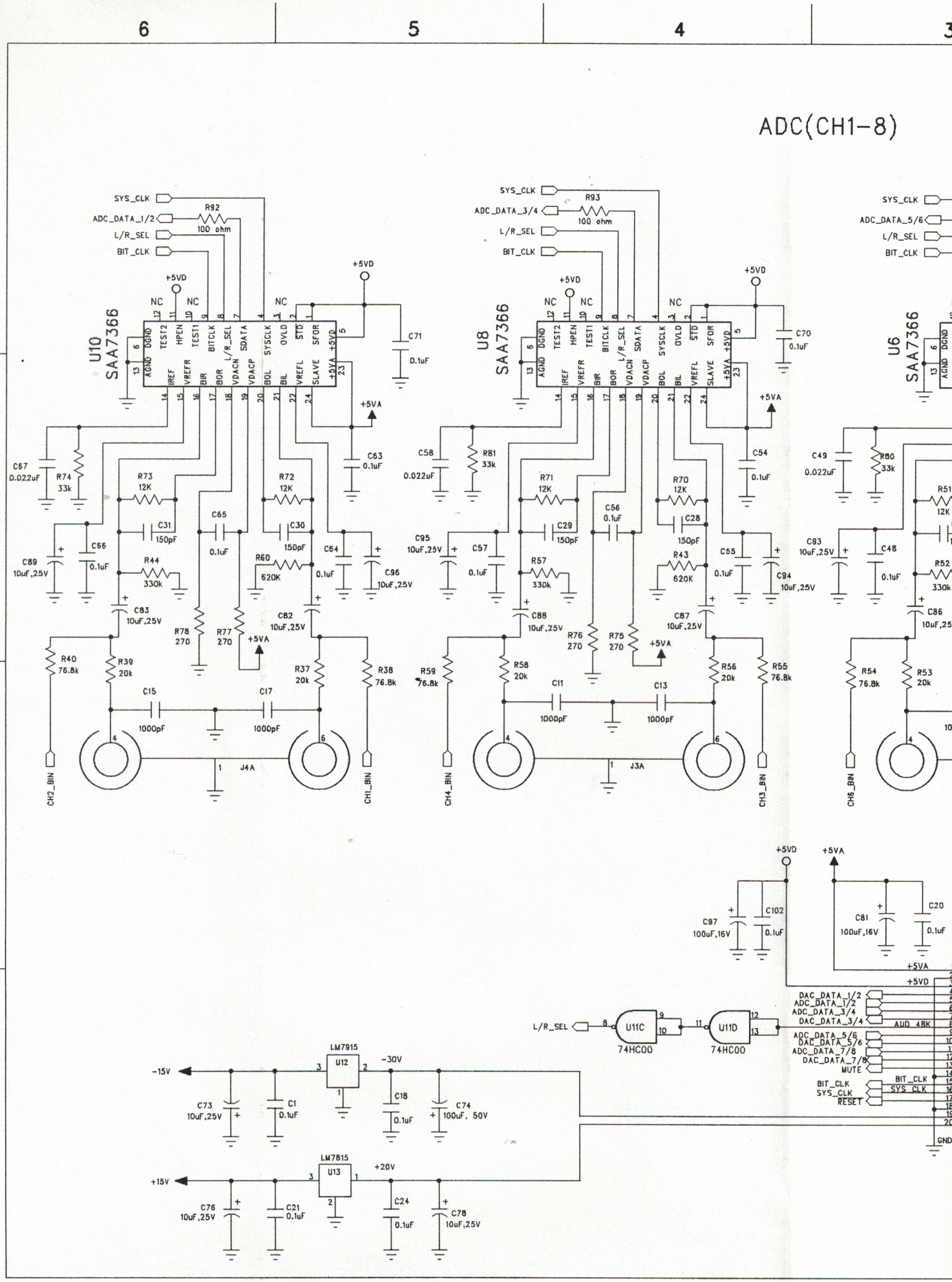


TO BALANCED AUDIO BOARD



DRAWN: GG	DATED: 3/22/96	COMPANY: ALESIS	
CHECKED:	DATED:	TITLE: ADAT-XT ADA AUDIO BOARD DACs, POWER ON/OFF MUTE BALANCED AUDIO CONNECTOR	REV: H
QUALITY CONTROL:	DATED:		
RELEASED:	DATED:	SCALE:	SHEET: 2 OF 2

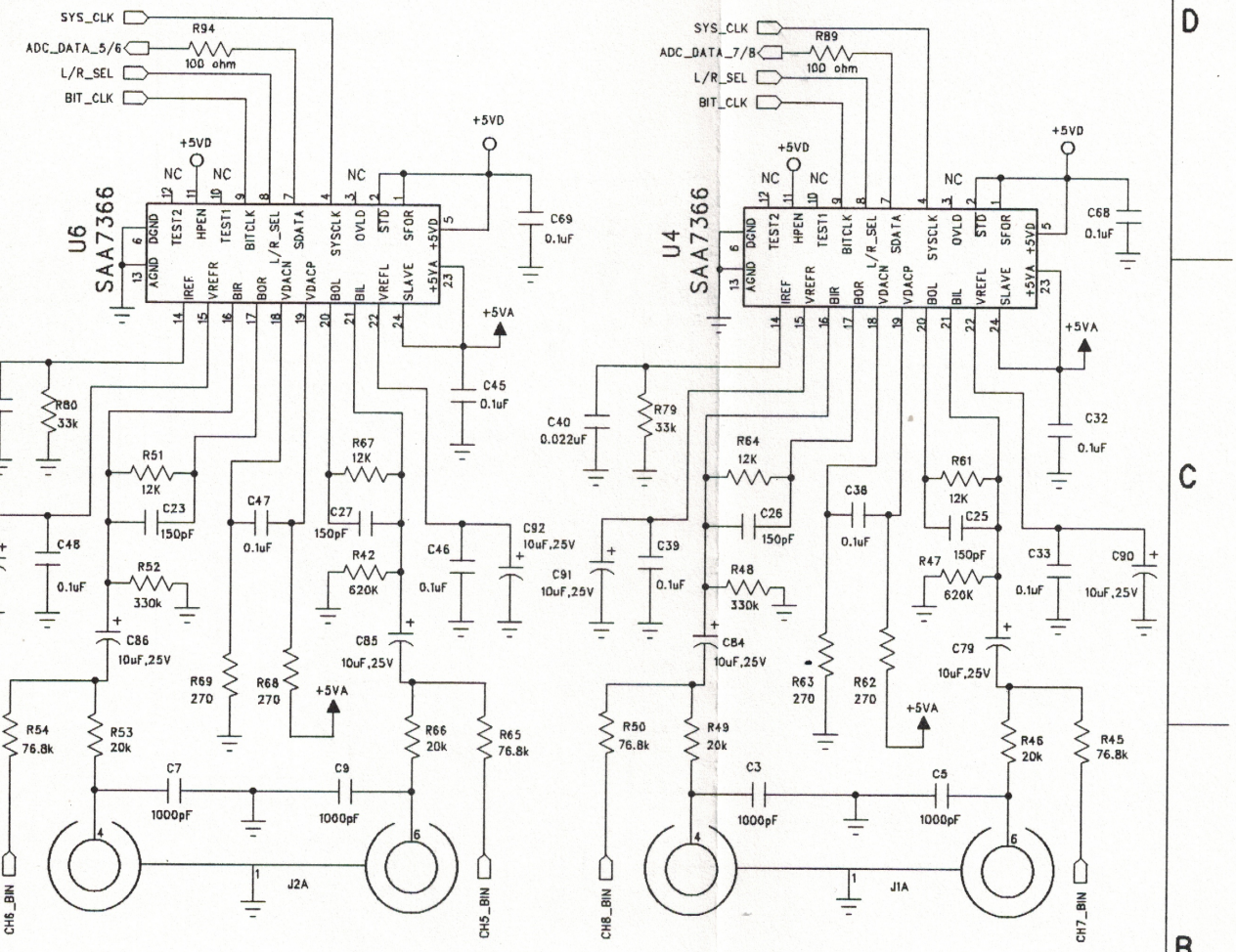
D C B A

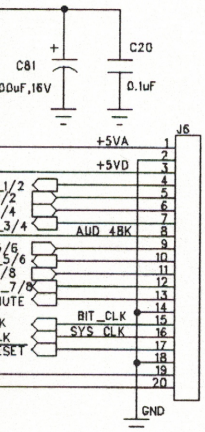

ADC(CH1-8)
SYS_CLK
ADC_DATA_1/2
L/R_SEL
BIT_CLK
R92
100 ohm
U10
SAA7366
C71
0.1uF
C63
0.1uF
C67
0.022uF
R74
33k
R73
12K
R72
12K
C31
150pF
C30
150pF
C65
0.1uF
C66
0.1uF
C89
10uF,25V
R44
330k
R60
620K
C64
0.1uF
C96
10uF,25V
C83
10uF,25V
C82
10uF,25V
R78
270
R77
270
R40
76.8k
R39
20k
R37
20k
R38
76.8k
C15
1000pF
C17
1000pF
J4A
CH2_BIN
CH1_BIN
R93
100 ohm
U8
SAA7366
C70
0.1uF
C54
0.1uF
C58
0.022uF
R81
33k
R71
12K
R70
12K
C29
150pF
C28
150pF
C56
0.1uF
C95
10uF,25V
C57
0.1uF
R57
330k
R43
620K
C55
0.1uF
C94
10uF,25V
C88
10uF,25V
C87
10uF,25V
R76
270
R75
270
R59
76.8k
R58
20k
R56
20k
R55
76.8k
C11
1000pF
C13
1000pF
J3A
CH4_BIN
CH3_BIN
U6
SAA7366
C49
0.022uF
R80
33k
C48
0.1uF
C93
10uF,25V
C86
10uF,25
R54
76.8k
R53
20k
CH6_BIN
+5VD
+5VA
C97
100uF,16V
C102
0.1uF
C81
100uF,16V
C20
0.1uF
L/R_SEL
U11C
74HC00
U11D
74HC00
DAC_DATA_1/2
ADC_DATA_1/2
ADC_DATA_3/4
DAC_DATA_3/4
AUD_48K
ADC_DATA_5/6
DAC_DATA_5/6
ADC_DATA_7/8
DAC_DATA_7/8
MUTE
BIT_CLK
SYS_CLK
RESET
GND
LM7915
U12
-15V
-30V
C73
10uF,25V
C1
0.1uF
C18
0.1uF
C74
100uF, 50V
LM7815
U13
+15V
+20V
C76
10uF,25V
C21
0.1uF
C24
0.1uF
C78
10uF,25V

3 2 1

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

11-8)

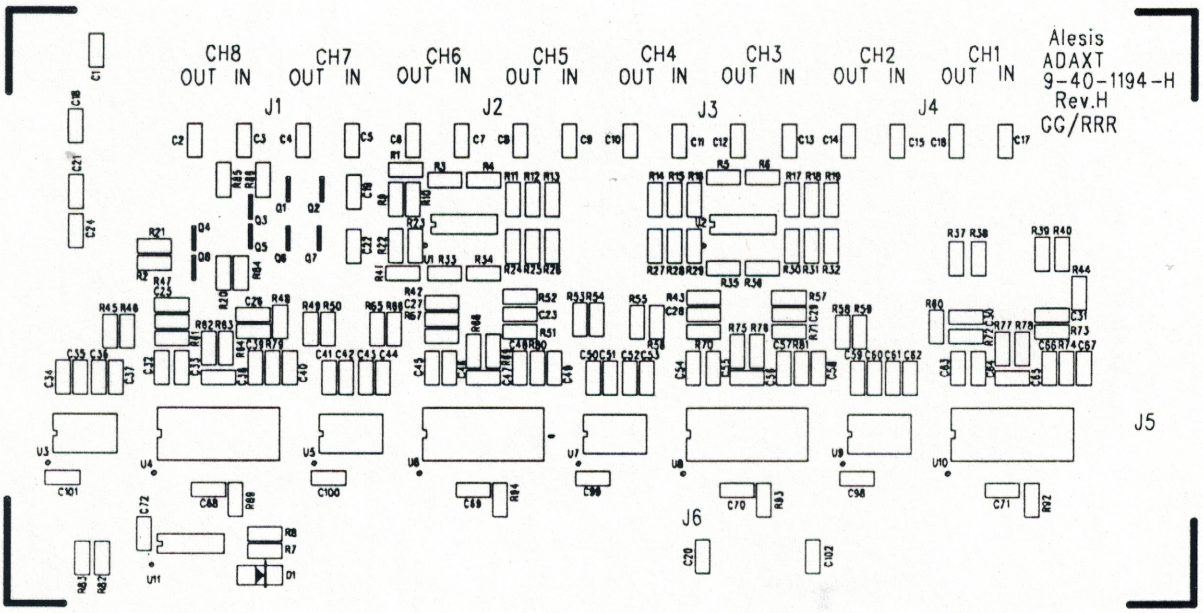




TO MAIN PROCESSOR BOARD

DRAWN: GG	DATED: 3/22/96	COMPANY: ALESIS	
CHECKED:	DATED:	TITLE: ADAT-XT ADA AUDIO BOARD ADCs, +/-15V REGULATORS RESET, MAIN BOARD CONNECTOR	
QUALITY CONTROL:	DATED:	CODE: CDAD	SIZE:
RELEASED:	DATED:	DRAWING NO:	REV: H
		SCALE:	SHEET: 1 OF 2

D C B A



A/W 09-40-1194 REV.H "TOPSILK" LAYER1

A/W 09-40-1194 REV.H "BOTSILK" LAYER4